

THE
CANADIAN
ROSE ANNUAL
2007

Kenneth McFarquhar

EDITOR



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EDITOR'S MESSAGE.

I am pleased to be the new Editor of the Canadian Rose Annual. I was the Editor of the 1995 Annual and so it has been a long sabbatical. I offer my congratulations to Doreen Stanton, not only for her extended service as Editor of this publication but for her faithful service to the Canadian Rose Society in many capacities. Doreen is that kind of person which every organization needs, in that when there is a job to be done she is the first to say "here I am".

It likely won't be a surprise to anyone that this Annual is different than those produced by Doreen. This does not imply that either hers or mine are superior to the other, but just that all editors have different visions of what a publication should be, and their respective visions will be reflected in what they produce. I would like to use this message to tell you what I am trying to achieve in this and any future Annuals for which I am responsible.

But first of all I want to mention an omission in this issue which has appeared for many years in past issues, and that is that there is no listing of Public Rose Gardens. I am omitting this list because this information is available on the CRS website. So if you are visiting another area of Canada and want to know what and where these gardens are I invite you to our website. And while there you might check the other important information that is included therein.

I believe that our roses will only be as good as the soil in which they are grown. And so one of the primary themes of my Annuals will be how we can achieve and maintain a the cultural conditions which will produce the best roses that our climate can produce. In addition I will attempt to address potential solutions to the problems which we seem always to be encountering.

There is tremendous variety and volume of articles being written for other publications, and I believe it is the responsibility of the editor of this publication to be aware of their existence and to print the best of them in the Annual. We don't want the Annual to become simply a clearing house for articles of other organizations, but likely in every issue there will be something available from other sources which will be of great value to our members.

There will not continue to be a Canadian Rose Society if there are not strong and active local societies. And these local societies deserve praise and visibility for their constant efforts on behalf of the rose. I do not see it as a responsibility of the Annual to report on the regular ongoing activities of the local societies, this is much better handled by the local society newsletters. But the An-

nual can serve to inform the rest of the societies about special events, special people, etc. in specific societies. Hopefully at least some of these ideas will be an inspiration to other societies.

Every organization is concerned about the lack of participation by young people. And if you want young people you should get them when they are really young! In this issue there are profiles of two very young people who are already very active in roses. I invite other readers of this journal to inform me of other young people who are similarly involved in roses so that we can present profiles of them in future issues. And of course the undercurrent of this is that all of us should do our utmost to encourage the young people of our acquaintance to become involved as well.

Canada is a big country and it is difficult for one person to know enough about the whole country to get articles which will necessarily satisfy people in every province. And so what I plan to do, hopefully by the next issue, is to establish a CRS Annual Editorial Committee. The responsibility of the members of that committee will be to suggest areas in which we should solicit articles, and to suggest people who might be amenable to producing those articles. It will not be a requirement to actually write articles although if a person were so inclined that would be great. The committee will likely consist of 2-3 members, and the intention will be to have members from right across the country.

As I review the contents of this issue I note that there are two aspects which are underrepresented, articles on specific roses and as many pictures of roses as there maybe should be. This in no way represents a policy, but is simply the result of wanting to cover a number of other issues, and a lack of time to consider all aspects in my first year in this job. In future issues I hope to rectify these situations.

Probably the main problem plaguing rose growers is black spot. And it seems to me that everyone has a possible solution to the problem, but there is always someone else who states that it is not a solution. I hope to introduce an article, or a series of articles in future issue or issues, which will try to find some way to discover consistency on this issue. A start has been made in the current issue with the article by Claire Laberge and her scientific study of the effectiveness of potassium bicarbonate.

I have heard more than once that the most popular item in the Annual is the Clearing House. People love to read it to discover which of the new roses are most worthwhile to grow in their gardens. Unfortunately there is a declining number of people who are making contributions to this report. As a matter of fact,

there were 20 reporters in the 2005 Annual, 14 in the 2006 Annual and only 9 in this Annual. If this trend continues it is obvious that the future life-span of the Clearing House is short. I would encourage everyone who grows any of the listed new roses to submit a report for the 2008 Annual. There is a report form accompanying this Annual which you can use to submit your report, and the subject was also raised in a recent issue of The Composter.

I apologize for the late arrival of this year's Annual but it took me some time before I could figure out what I was doing after I was invited to assume this role. Next year we should be able to return to a more reasonable schedule.

There is one person I must thank most profusely and that is my wife Lois. When a play is presented the director has the responsibility for gathering together the content and making sure it all ties together and that it is coherent. But once the production starts then the director ceases to have much say and all the responsibility falls into the lap of the stage manager. Both jobs are huge, both are essential to the successful production of the play, but they are much different jobs. And in a sense the presentation of this Annual has been a similar procedure. I as the editor (director) had the responsibility for obtaining the content and ensuring, or hoping, that it makes sense and fills a need. Lois then took over as the producer (stage manager) to actually get into readable form what you have before you. We both hope that it satisfies your expectations.

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**PRESIDENTS
of
THE CANADIAN ROSE SOCIETY
and its predecessor
THE ROSE SOCIETY OF ONTARIO**

1913-15 Mrs. Allen Baines	1966-67 Judge M. A. Cadsby
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CANADIAN ROSE SOCIETY DEMONSTRATION ROSE GARDENS

*(Chairman: Doreen Stanton, 172 Maplehurst Ave., Willowdale,
Ont. M2N 3B9)*

Demo Gardeners love to show off their gardens but would appreciate a call before visiting. Not nice to be caught with the weeds showing.

If you have a rose garden you'd like to be considered as a Demonstration Rose Garden, write to the Chairman or email her at doreen.stanton@sympatico.ca.

British Columbia

Janet A. Wood	7084 Blenheim St., Vancouver, B.C. V6N 1R9	604-263-8700	Climbers and Most Others
Patrick White	4291 Gordon Head Rd., Victoria, B.C. V8N 3Y4	250-592-6640	Most Classes

Saskatche- wan

Diann Putland	Box 24, Churchillbridge, Sask S0A 0M0	306-896-2992	Hardy Shrubs Email: putd@sasktel.net
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Ontario

Jim Anderson	8 Melville Cres., Brampton, ON L6W 2S4	905-459-6518	Most Classes
Donna & Frank Barkey	4405 Townline Rd. N. R.R.2 Blackstock, ON. L0B 1B0	905-655-3561	Explorers and Morden Roses and other Hardy Roses
Edna Caldwell	R.R. 1 Shanty Bay, ON L0L 2L0	705-721-0484	Hybrid Teas Hardy & Old Roses
Claire & Ian Finch	21 Ashall Blvd. Toronto, ON. M4B 3C2	416-755-9735	Hybrid Teas Most Classes

Kenneth & Rachel Flood	155 Edgehill Dr., Kitchener, ON. N2P 2C6	519-653-9505	Most Classes
Manuel & Manuela Goulart	1412 Northmount Ave. Mississauga, ON L5E 1Y6	905-274-9488	Most Classes
Ray & Elea- nor Hopkins	14 Lawrence Ave. Stoney Creek, ON L8G 2M7	905-664-4592	Hybrid Teas OGR's
Walter Lemire	RR1 Oldcastle, ON N0R 1L0	519-737-6788	Hybrid Teas
Larry Lougheed	19 Sundance Cres Scarborough, ON M1G 2M1	416-439-7494	Hybrid Teas Hybridizes Roses
Lucille McDonald	240 John St., Gananoque, ON K7G 1A7	613-382-2333	email clmcdonald@ sympatico.ca
Doreen Stanton	172 Maplehurst Ave. Willowdale, ON M2N 3B9	416-229-0656	Hybrid Teas Miniatures
George & Joyce Turner	5386 Birdcage Walk Burlington, ON L7L 3K6	905-637-6468	Most Classes
Lindsay Wilcox	1164 Golf Club Road RR#1 Hannon ON L0R 1P0	905-692-9102	OGR's Shrubs

C.R.S SUSTAINING MEMBERS—2007

The Canadian Rose Society would like to thank the following Members and others for their generous support this past year.

Mary Baillie
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Kiyo Endo
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Margaret Riley
Dr. Roberta Roberts
Carol Ann Slipetz
Margaret Spence
Doreen Stanton
Avery Wagg
Philip G. Webster

An essential source of income for the Canadian Rose Society is the membership fees, which are paid by you, the members. But like most organizations this income is not sufficient to enable the Society to do everything that it would like to do, and should do, to promote the rose in Canada. Many members give an additional amount to help the Society cover this difference, and by so doing they become sustaining members.

If you would like to give a donation to the CRS of any amount you can either include it with your annual membership renewal or contact the Treasurer, Marie Farnaday, whose address is given with the list of officers. An income tax receipt will be issued for your additional contribution. The Canadian Rose Society thanks you most sincerely for your donation.

**CANADIAN ROSE SOCIETY
ACCREDITED JUDGES**

*Chairman: Rachel Flood, R.R. #3, 155 Edgehill Dr.,
Kitchener, Ontario N2P 2C6*

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Mary Baillie, Tatiana Kochanski, Claire Laberge,

ROSE CONSULTANTS

The Canadian Rose Society has developed a program of Rose Consultants who are available to be called upon by both Affiliated Rose Societies and Garden or Horticultural Societies as well as members of the general public. Their purpose is to provide help and information on the growing of roses particularly in their own parts of the country where they have the most experience. Many are familiar with conditions in other areas or can get the information in short order. All have grown roses for a number of years and have served the Canadian Rose Society in many ways: as Regional Directors or members of the Board, as Demonstration Gardeners, or as Judges. All have shown a desire and willingness to communicate and share their knowledge as speakers or writers and as assistants at Rose Shows or other displays of plants and roses.

Jim Anderson	8 Melville Cres., Brampton, ON L6W 2S4	905-459-6518
Mary Baillie	145 Brandy Rd., Foster, QC J0E 1R0	450-539-2906
Audrey Brisbane	1146 Lucille Drive, Brentwood Bay, BC V8M 1H6	250-652-4071
Ralph Bullough,	R.R. #14, Thunder Bay, ON P7B 5E5	807-767-2331
Edna Caldwell	R.R. #1, 274 Line 3 South Shanty Bay, ON L0L 2L0	705-721-0484
Reta Caldwell	4 Pinehill Court, Innisfil, ON L9S 1R5	705-721-1777
Richard W. Chambers	157 Pinewood Ave., Toronto, ON. M6C 2V6	416-653-9654
Barbara Clarke	476 Martin Grove Road, Etobicoke, ON. M9B 4M4	416-622-6422
Janeth Cooper	70 Plateau Crescent, Don Mills, ON M3C 1M8	416-444-6882
Denis Creighton	3 Naylor Street, Maple, ON L6A 1R8	905-832-1101
Joan E. Dobell	10675 Madrona Dr., North Saanich, B.C. V8L 5L8	250-656-8666
Wendy Downing	180 Dalewood Cres., Hamilton, ON L8S 4C1	905-528-7441

Claire Finch	21 Ashall Blvd., Toronto, ON M4B 3C2	416-755-9735
Rachel Flood	155 Edgehill Dr., Kitchener, ON N2P 2C6	519-653-9505
Ethel Freeman	15 Chiltern Hill Road, Toronto, ON M6C 3B4	416-787-4451
Ianthe Christine Goodfellow	Box 123, Pincher Creek, AB T0K 1W0	403-627-3709
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Viola Heaslip	1025 Greenridge Cres., Victoria BC V8X 3B8	250-479-6563
Denise G. Kennedy	P.O. Box 1463, Stouffville, ON L4A 8A3	905-642-2627
Claire Laberge	4311 de Bordeaux, Montréal , QC H2H 2E3	514-524-1652
June Laver	7791 Mill Lane, Caledon , ON L0N 1C0	905-880-4486
Len Lee	461 Gowland Cres., Milton, ON L9T 4G6	905-878-4085
Ross B. Linton	Unit 502, 1 Royal Orchard Blvd., Thornhill, ON L3T 3C1	416-327-5492
Larry Lougheed	19 Sundance Cres., Scarborough, ON M1G 2M1	416-439-7494
Norman A. Mackay	324 Newbold Court Burlington, ON L7R 2Y6	905-637-6401
Lucille McDonald	240 John St., Gananoque, ON K7G 1A7	613-382-2333
Dr. Donald M. McLean	Apt. 6-5885 Yew St., Vancouver, BC V6M 3Y5	604-263-9076
John McLean	57 Rangeley Drive, Scarborough, ON M1B 5L4	416-724-5349
Robert Osborne	Corn Hill Nursery, 2700 Route 890, Corn Hill, NB . E4Z 1M2	506-756-3635
George Pagowski	Apt. 1103-1966 Main St. W., Hamilton, ON L8S 1J6	905-528-2175

Marie Pearson	3272 Valmarie Ave., Mississauga, ON L5C 2A8	905-275-7089
James J. Scherrer	9 Bluejay Road, Elmira, ON N3B 1H9	519-669-5967
Elizabeth Schleicher	2369 Doncaster Drive, Burlington, ON L7P 3V9	905-335-9399
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Doreen Stanton	172 Maplehurst Ave., Willowdale, Ont. M2N 3B9	416-229-0656
Philip G. Webster	4 Cowley Ave., Etobicoke, ON M9B 2E1	416-233-7831
R. Patrick White	4291 Gordon Head Rd Victoria, BC V8N 3Y4	250-592-6640
Lindsay Wilcox	1164 Golf Club Road RR#1 Hannon, ON L0R 1P0	905-692-9102
Janet A. Wood	7084 Blenheim St., Vancouver, BC V6N 1R9	604-263-8700
C. Denis Yeomans	4475 Stonehaven Ave., North Vancouver, BC V7G 1E7	604-929-6166

If you would like further information on this program would you please contact the secretary, Marie Farnaday. Her contact information is given on the list of officers.

Presidents Address

My address this year is focussed on change and new connections. Our organization is not unlike many long standing groups that have long traditions and a history of dedicated volunteers both on the board and committees. In my various articles I have discussed the struggle the board and organization has undergone trying to find the new direction that will connect with the "new member".

The green movement in its many forms is definitely one of the most prevalent forces in the horticultural industry and increasingly the political forums of the world. Why is the rose world seemingly being overlooked by the vast numbers of newly aware "green" people. In the past we have tended to brand ourselves as a specialist group. Our hobby required large amounts of herbicide, pesticide, fertilizer and arcane knowledge. These practices put us on the wrong side of the environmental fence whether it was true or not. Obviously we need to rebrand ourselves to suit the changing times. This does not mean we throw out all previous knowledge and practice but it does mean we should put forward a simpler, more environmentally friendly face. I think many of us are moving in this direction but we need to show this to the world.

A project which has been discussed in previous publications is the Earth -Kind roses. This is an effort by Texas A and M University. The project seeks to find roses capable of surviving without pesticides and herbicides. As well the roses are grown in mulched beds without supplementary water after initial planting. Obviously roses meeting these criteria will vary with climate type, soil and various other factors. At present we have one project running in Victoria. We are looking at encouraging projects both large and small across the country and collecting data for public access. Any rose can be considered and the prime factor will be the ability to survive without the type of care for which roses have been associated. This type of project should produce an entry for people to enjoy roses without compromising any ecological ideals.

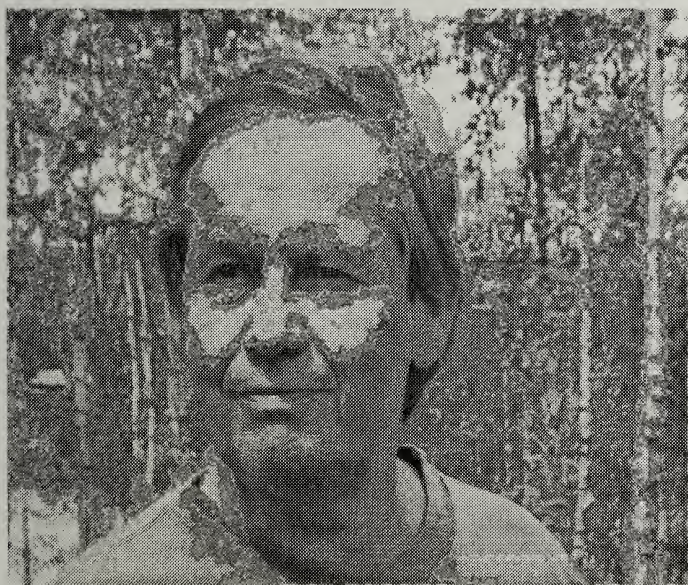
Another national project we are considering is the compilation of a guide to growing roses. This seems like reinventing the wheel. However we would anticipate regional focus to customize the information. A guide made up of regional information would sort out the choices for the person in Winnipeg as well as the new grower in Victoria. If this guide were to be maintained on the web site we could easily add or subtract information as new ideas and practices are developed. Again if we emphasize the organic and cultural solutions rather than a straight chemical approach we would fit in with current trends.

The other major trend that we must make better use of is

the electronic media. In the last ten years the CRS, as well as many other horticultural groups, has made great strides into the internet. The trend of course is for even more information as well as electronic publications. Face book and You tube may not be our everyday world but it is the norm for many people, especially under thirty. I am the first to be puzzled by such phenomena but I think these are areas that we need to investigate. The very fact that I know about these areas means they are probably out of date and something new is up and coming. Confusing as this is, it is where many of the youth are looking for information and entertainment. We need to look to all areas of the media. Already we find it much easier to communicate across the country and the world and this is an area that doesn't make any geographic discrimination, all can contribute equally.

I would hope some of these ideas will excite people enough to want to help. With use of the internet and conference call we have made participation as easy as sitting at your desk at home. Participation in some of these efforts will only serve to help bring the country closer and draw new members to our organization.

Ralph Bullough,
President, CRS



LOCAL ROSE SOCIETIES IN CANADA

Vancouver Rose Society – Greater Vancouver area, B.C.

President: Sandy Tordiffe

E-Mail: stordiffe@shaw.ca

Tel:

Website: www.vancouverrosesociety.org

Fraser Pacific Rose Society - Coquitlam, B.C.

President: is Peter Howard

E-mail: peterh@pacificcoast.net

Tel: 604-931-5120

Website: www.fprosesociety.org

Peninsular Rose Club - Victoria & Sidney, BC

President is Pat Calveley

Tel: 250-479-2394

E-Mail: calvelevin victoria@shaw.ca

peninsular@quillserv.com

Website: nurserysite.com/clubs/peninsular

Mail: 125 Clarence St., Victoria, B.C., V9A 3S5

Calgary Rose Society – Calgary, Alberta

President is Cherie Lowe

cherielowe@shaw.ca

403-295-6871

Website: www.calgaryrosesociety.com

Email for Society: info@calgaryrosesociety.com

Saskatchewan Rose Society - Saskatchewan

President is Koren VanGool

E-Mail: ldmelsted@shaw.ca

Tel: 306-373-8299

Website: <http://icangarden.com/clubs/sroses/>

The Wm. Saunders Rose Society - Southwestern Ontario, Woodstock and Tillsonburg to Sarnia and Chatham

President is Richard Cartwright

dominionday@hotmail.com

E-Mail: wm.saundersrose@sympatico.ca

Tel: 519 633-3939

Website: <http://www3.sympatico.ca/wm.saundersrose>

Golden Triangle Rose and Garden Society – Kitchener/Waterloo, Ontario
President is Len Lee
E-Mail: mroseon@look.ca
Tel: 905-878-4085

Huronian Rose Society – Barrie, Ontario
President is [Karen Shamas](#)
E-Mail: kshamas@transl8.ca
Tel: 705-726-1376
Website: www.huroniarose.usethe.com
Email for society: huroniarosesociety@usethe.com

Greater Toronto Rose & Garden Society-Toronto, Ontario
President: Shari-Lyn Safir
27 Camberwell Road
Toronto, Ontario M6C 3E7
Tel: 416-789-4922
Website: <http://www.interlog.com/~onthort/dist5/yorkrose/gtrgs.html>

Hamilton and Burlington Rose Society
President is Stephen Bower
E-mail: Bower_5@hotmail.com
Tel: 905-662-4090
Website: <http://dir.gardenweb.com/directory/hbrs>

Society: Société des Roses du Québec Rose Society - Province de Québec, Quebec province
President Diane Vigneault
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PEI Rose Society
Alice Homer – President
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Member, PEI Rose Society
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CANADIAN ROSE SOCIETY (CRS)

MINUTES of the ANNUAL GENERAL MEETING (AGM)

Date: Sunday, 18 March 2007, 3:45 to 4:30 p.m.

Place: Toronto Botanical Gardens, Toronto, Ontario

Opening Welcome & Call To Order:

According to the bylaws, having a quorum, Ralph Bullough called the meeting to order and extended a welcome and thank you to the members and the guest speaker for attending.

In Memoriam:

A minute silence was observed in memory of our membership who died during the past year.

Minutes of the Previous Meeting: - 26 March 2006 as published in the Rose Annual.

Motion by George Pagowski and seconded by Elizabeth Schleicher that the minutes of the 2006 AGM be adopted as printed in the 2006 Annual.

All in Favour - Motion Carried.

There was no business arising from the minutes.

President's Report

I would like to welcome the members of the Canadian Rose Society both old and new members. We have been fortunate to have our honoured guest Edna Caldwell speak to the members and guests. I should also thank the excellent work of the Greater Toronto Rose Society in helping with the program.

The CRS has long tried to represent the Canadian rose community. This has not always worked. Historically the organization started from the centre and tried to reach out to the rest of the country. This has produced mixed results and division. We need to reinvent ourselves and take it back to the local level. The CRS must be governed by the local groups both sitting on the board and setting priorities. The society will become the national umbrella organization providing resources to the grassroots. Discussions with various groups have identified some priorities-communication, web presence, information, advocacy, coordination of speaking tours and publications. As well the CRS is working closely with Vancouver on the 2009 WFRS convention.

Once we have embraced our roots we can look to expanding the member organizations and connect with new members. If we can complete the "buy in" of local rose societies we will not compete for members as membership in one would give you membership in the other. This would be the ideal situation however we have a good deal of work still to reach the objective.

Today we have new bylaws to facilitate the change. The bylaws will probably have to be further changed as we come to grips with

the new relationship with the various rose groups. Nothing is perfect and the only thing that is constant is change.

Thank you

Ralph Bullough, President

Treasurer's Report: Prepared by Marie Farnady and presented by Ken Flood. The following report was read and the full audited financial statement, dated December 31, 2006, was distributed and reviewed.

TREASURER'S REPORT – A G M, March 18, 2007

For the past several years the Board has been working with a budget for fiscal matters. The audited financial statements for year ended December 31, 2006 reflect the budget that was accepted by the Board on January 19, 2006. Overall, we are \$2,578. short of the budget, the main reason is that we did not achieve the level of advertising revenues anticipated for the various publications.

We finished the fiscal year with an accumulated operating surplus of \$9,615 and held cash in the bank of \$26,254. of which \$12,104. was in the operating account. \$14,150. is a segregated account held for education.

The following changes were made in 2006:

Changing auditors created a savings of approximately \$500; the value added service of Wilkinson & Company is appreciated and saves me some time by not having to prepare the Not-for-Profit Information Return to the government.

Changing insurers created a savings of \$700.

Changing the format of the CommPoster to an 8-page publication cut down on the cost of production and mailing.

By asking the membership to voluntarily add \$10.00 (for postage) to the renewals created a surplus in the postage expense. I would like to thank all members who included this amount in their renewal.

Our financial health is not bad for the size of operation and membership; the net change from 2005 to 2006 is (\$1,391).

For 2007 we must work harder on getting the advertising revenue dollars in to make the publications more financially viable.

Any member seeking clarification and more information on the audited financial statements should email me the request. My email address is in all the CRS publications.

Discussion comments: Ken commented that we are in reasonable shape. Our cash balance is \$26,254, down \$1,391 from last year. The detailed financial statement will be published in the next Canadian Rose Annual.

Motion by Jim Anderson, seconded by George Turner, that this report be accepted.

All in Favour- Motion Carried

Appointment of Auditor:

Motion by Ken Flood, seconded by Claire Finch that Wilkinson & Company LLP, Chartered Accounts of 785 Midpark Dr., Suite 201, Kingston, ON K7M 7G3 (J.L. Fisher, FCA) be appointed as Auditor for Year End December 31, 2007.

All in Favour - Motion Carried.

Membership Report: There are 244 paid-up members.

Motion by Ken Flood, seconded by Mary Audia, that the membership report be accepted.

All in Favour - Motion Carried

Presentation of Nominations for the Board of Directors: Ralph Bullough read out the list of names of individuals agreeing to stand for CRS Board positions:

Patrick White, Victoria, BC Ralph Bullough, Thunder Bay, ON

Rachel Flood, Kitchener, ON

Marie Farnady, Kingston, ON George Pagowski, Hamilton, ON

Claire Laberge, Montreal, QC

Motion by Elizabeth Schleicher, seconded by George Turner that the member's names be accepted to the Board.

All in Favour - Motion carried.

The above members were declared elected for a one-year term to the 2007 Board of Directors.

Adjournment at 4:30 p.m. – There being no further business the meeting then adjourned.

Ken Flood, Secretary

Ralph Bullough, President

GUEST SPEAKER

Our guest speaker was Edna Caldwell. The subject of her presentation was

“Be Kind to Your Roses (and yourself) - enjoying growing beautiful roses while not damaging our environment.”

Topics included soil health, disease preventative techniques and environmentally-friendly measures in dealing with insect problems.

There were many questions and much interest shown by the audience which included members of the Greater Toronto Rose & Garden Society-Toronto, Ontario, members of the Canadian Rose Society and some paying attendees from the general public. The presentation was from 2 to 3:30 p.m. Refreshments were then served.

CANADIAN ROSE SOCIETY (CRS)

MINUTES of the SPECIAL GENERAL MEETING

Date: Sunday, 18 March 2007, 4:30 to 5:30 p.m.

Place: Toronto Botanical Gardens, Toronto, Ontario

Opening Welcome & Call To Order:

According to the bylaws, having a quorum, Ralph Bullough called the meeting to order and extended a welcome and thank you to the members. The purpose of the Special General Meeting is to review the proposed By-Law changes and to vote on them. The proposed By-Laws will facilitate the national thrust of the CRS, enabling CRS general and special meetings to be held across the country, and have the CRS run and managed by the local societies across Canada.

PROPOSED BY-LAWS, dated March 18, 2007

The proposed revised By-Laws were reviewed in complete detail, item by item, some changes were suggested by the members and revisions made accordingly.

Motion by Ken Flood, seconded by Jim Anderson, that the proposed By-Laws be accepted.

All in Favour - Motion Carried.

The proposed By-Laws will be reviewed again by the Board of Directors and then sent to Industry Canada for review and approval.

Adjournment at 5:30 p.m. – There being no further business the meeting then adjourned.

Thank you members for staying late to get through all of the By-Laws.

Ken Flood, Secretary

Ralph Bullough, President

AUDITOR'S REPORT

To the Members of The Canadian Rose Society

We have audited the statement of financial position of The Canadian Rose Society as at December 31, 2006 and the statements of Reserve - Restricted for Education, revenue, expenditures and operating surplus and cash flows for the year then ended. These financial statements are the responsibility of the society's management. Our responsibility is to express an opinion on these financial statements based on our audit.

Except as explained in the following paragraph, we conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. In common with many not-for-profit organizations, the society derives revenue from fundraising, donations and memberships, the completeness of which is not susceptible of conclusive audit verification. Accordingly, our verification of these revenues was limited to the amounts recorded in the records of the society and we were not able to determine whether any adjustments might be necessary to these revenues, excess of revenue over expenditures, current assets and fund balances.

In our opinion, except for the effect of adjustments, if any, which we might have determined to be necessary had we been able to satisfy ourselves concerning the completeness of the revenue referred to in the preceding paragraph, these financial statements present fairly, in all material respects, the financial position of the society as at December 31, 2006 and the results of its operations and cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

The prior year's financial statements were reported on by another chartered accountant.

Kingston , Canada
January 31, 2007

Wilkinson & Company Limited
Chartered Accountants

THE CANADIAN ROSE SOCIETY

Statement of financial position as at December 31, 2006

	2006	2005
ASSETS		
CURRENT		
Cash	26,254	27,645
GST Recoverable	639	1,681
Interest receivable		23
Prepaid expenses	1,654	1,731
	<u>28,547</u>	<u>31,080</u>

LIABILITIES		
CURRENT		
Accounts payable		
And accrued liabilities	1,305	2,236
Deferred revenue -		
Prepaid Memberships	3,477	2,501
	<u>4,782</u>	<u>4,737</u>

NET ASSETS		
RESERVE—RESTRICTED FOR		
EDUCATION	14,150	14,150
OPERATING SURPLUS	9,615	12,193
	<u>23,765</u>	<u>26,343</u>
	<u>28,457</u>	<u>31,080</u>

Editor's Note

References in these statements are made to Notes. We have not included these notes here in the interest of saving space. If you wish to see the notes they can be obtained from the Treasurer whose name and address is given in the list of officers.

THE CANADIAN ROSE SOCIETY
Statement of Revenue, Expenditures and accumulated
Operating Surplus for the year ended December 31, 2006

	2006 Budget Note-4	2006 Actual	2005 Actual
REVENUE			
Donations	3,240	8,675	2,985
Interest Income		121	299
Memberships	9,800	10,567	12,129
Other (Net)	14,755	3,283	1,426
	<u>27,815</u>	<u>22,646</u>	<u>16,839</u>
EXPENDITURES			
Professional Fees	1,170	4,352	1,133
Honorarium		500	1,500
Insurance	2,800	2,706	2,711
Office and General	1,090	1,163	2,658
Publishing	19,325	14,905	15,882
Telecommunications	3,700	1,598	2,067
Translations			896
	<u>28,085</u>	<u>25,224</u>	<u>26,847</u>
Excess of Revenue over Expenditures for year for General Operations	(270)	(2,578)	(10,008)
Excess of revenue over <u>Expenditures—Jubilee Conference</u>			<u>13,673</u>
Excess of Revenue over Expenditures (expenditures Over revenue) for year	(270)	(2,578)	3,665
Accumulated Operating Surplus beginning of year	12,193	12,193	22,201
<u>Appropriation to Reserve- Restricted for education - Note5</u>			<u>(13,673)</u>
<u>Accumulated Operating Surplus End of Year</u>	<u>11,923</u>	<u>9,615</u>	<u>12,193</u>

.La lutte intégrée à la roseraie du Jardin botanique de Montréal *Par Claire Laberge*

L'un des grands défis à relever dans un jardin est la préservation de l'équilibre naturel entre les organismes nuisibles et les organismes bénéfiques. L'état de santé des plantes nous informe sur l'équilibre de l'environnement. Une connaissance approfondie des maladies et des insectes nous guide dans les interventions à poser en saison, au jardin. Cultiver des rosiers en respectant l'environnement est-ce possible? À cette question, Régent Harvey, horticulteur responsable de la phytoprotection au Jardin botanique de Montréal répond : « oui ». Dans cet article, je vais partager avec vous mon entretien avec Régent Harvey qui a accepté de faire le point sur les recherches et expérimentations en lutte intégrée à la roseraie du Jardin botanique de Montréal.-

Comment définir le concept de lutte intégrée?

La lutte intégrée est un ensemble de moyens biologiques, culturels, mécaniques et chimiques mis en œuvre pour maintenir les populations d'organismes pathogènes sous un seuil acceptable. L'incidence des maladies fongiques et des insectes ravageurs s'accroît avec le nombre de rosiers. En monoculture, un programme de lutte intégrée gagnant commence avant tout par une bonne régie de culture et une sélection de cultivars résistants. La gestion phytosanitaire intégrée d'un jardin n'est pas seulement l'œuvre d'une ou deux personnes mais elle se réalise grâce à la collaboration de tous ceux et celles qui forme l'équipe travaillant dans ce jardin.

-La roseraie du jardin botanique de Montréal possède une collection de 10,000 rosiers, comment êtes-vous passés de l'utilisation des pesticides chimiques au programme de lutte intégrée?

En 1995, nous avons débuté les essais de lutte intégrée sur une dizaine de plates-bandes de rosiers buissons (environ 700 rosiers). Ces rosiers recevaient un traitement hebdomadaire de bicarbonate de sodium en mélange avec de l'huile horticoles. Au cours de la saison, l'huile a causé de la phytotoxicité au niveau du feuillage des rosiers et a provoqué un retard de croissance général des plants. Cette même année, l'acarien *Amblyseius fallacis* fut introduit au niveau des hybrides de *Rosa rugosa* afin de stabiliser les populations d'acariens ravageurs et la coccinelle *Hippodamia convergens* fut introduite chez certains rosiers hybrides de thé dans le but de contrôler les pucerons.

Les années suivantes, nous avons expérimenté le savon insecticide et les bicarbonates de soude et de potassium, séparément puis dans

un traitement combiné. Les résultats étant concluants (1), nous avons augmenté la superficie traitée en lutte intégrée graduellement jusqu'en 2005, l'année où toute la roseraie était dans un programme de lutte intégrée. Parmi les essais de divers produits au cours des dix années d'expérimentation et d'observations, le bicarbonate de potassium en mélange avec le savon insecticide s'est avéré être une solution alternative aux utilisations de fongicides et insecticides de synthèses (2). Les anti-transpirants se sont avérés efficaces pour prévenir l'oïdium (3).

L'intensification de la lutte intégrée nous a amené à inclure un nouvel outil de travail, soit la fiche de dépistage (4) qui nous permet de suivre l'état phytosanitaire des cultivars de rosiers ainsi que l'efficacité et la phytotoxicité de nos interventions. Le bilan de ces fiches nous aide à déterminer nos plantes indicatrices (5) et notre stratégie d'intervention.

-La lutte intégrée autorise l'utilisation de pesticides de synthèse mais favorise l'utilisation de produits moins toxiques et à faible impact. Concrètement en 2007, utilisez-vous moins de pesticides de synthèse à la roseraie du Jardin botanique de Montréal?

En 1994, 16 pesticides de synthèse différents étaient utilisés à la roseraie dont 8 fongicides (90% niveau I, II), 5 insecticides (60% niveau I) et 3 acaricides (65% niveau II) pour un total de 20kg de matière active. En 2005, 2 pesticides de synthèse moins toxiques seront utilisés dont 1 insecticide (niveau III), 1 fongicide (niveau III) et aucun acaricide pour un total de 0,670 kg de matière active

En 2005, notre programme de pulvérisation (6) à la roseraie incluait 18 traitements généralisés dont 3 interventions seulement utilisaient des pesticides de synthèse, les 15 autres interventions étaient effectuées avec du bicarbonate de potassium et du savon. Résultat : une roseraie dans un état phytosanitaire de fin de saison très acceptable malgré une diminution de 90% des insecticides de synthèse et 90% des fongicides de synthèse sans aucun acaricide chimique employé. Ce programme d'intervention est devenu un outil de référence annuelle que l'on adapte à la réalité du jardin chaque saison.

Il ne faut jamais oublier que la lutte intégrée donne une priorité à la lutte biologique contre les ravageurs tout en favorisant le développement des organismes bénéfiques naturels et introduits. Il faut donc choisir les produits phytosanitaires les plus respectueux possibles des auxiliaires naturels ou introduits pour le programme de prévention.

- Un programme de lutte intégrée gagnant commence par une bonne régie de culture. Avez-vous des secrets à nous

transmettre?

Les conditions environnementales telles : l'ensoleillement, l'aération, le sol et le climat (température et humidité) influencent la dissémination des spores au jardin. La propreté des massifs, les distances de plantation alliées à une bonne taille annuelle de formation aident au contrôle de la tache noire, de l'oïdium et de la rouille. L'irrigation est un paramètre important, un apport régulier en eau à la plante, évite un stress hydrique qui résulte en un désordre de croissance et affaiblit les défenses naturelles du rosier devant les « visiteurs indésirables... »

- Et les plantes indicatrices, quel est leur rôle?

La résistance aux maladies fongiques chez les rosiers varie avec le bagage génétique de chaque cultivar. Lorsque dans un jardin, un cultivar de rosier est très sensible aux maladies fongiques, il faut d'abord s'assurer qu'il soit bien localisé et que ses besoins culturaux soient comblés afin de le maintenir en bonne santé. Mais, suite à un changement de localisation au jardin, si un rosier présente encore des symptômes de maladies, nous avons deux choix :

- éliminer le rosier trop vulnérable et le remplacer par un cultivar résistant, ou

- l'utiliser comme plante indicatrice

Dans une roseraie, les parasites ont tendances à réapparaître au même endroit et sur la même plante. Pourquoi ne pas utiliser ce défaut à notre avantage, puisque ce rosier nous annonce le début d'une infestation. Ces cultivars sensibles apparaissent sur nos fiches de dépistage.

- Pour l'avenir, avez-vous d'autres projets de recherches pour améliorer votre programme de lutte intégrée à la roseraie du JBM?

Nos recherches ultérieures porteront sur différentes expérimentations au niveau de l'utilisation des bio-fongicides à base de *Bacillus subtilis*, à base de Chitosan et d'ail ainsi qu'avec l'usage du thé de compost et de biostimulants.

Le compagnonnage des rosiers avec des plantes attractives visant les insectes bénéfiques et répulsives visant les arthropodes ravageurs est aussi une avenue intéressante qui débutera à petite échelle, dès l'été 2007, dans la section des rosiers anciens.

1. Chaque semaine, nous enregistrons des informations concernant la santé des rosiers sur une « fiche de dépistage ». La fiche de dépistage est une liste de cultivars à évaluer. Elle permet de suivre le développement des maladies fongiques et insectes. Par exemple pour la tache noire, la partie inférieure du plant sera évaluée selon le barème suivant, 1 = 1-20% affectée, 2 = 21 à 50% affectée et 3 =

51- 100% affectée. La partie supérieure du plant sera elle aussi évaluée en fonction de ce barème. Donc avec ce système, il y a possibilité de 6 niveaux d'infestation pour l'évaluation concernant la résistance à une maladie fongique d'un rosier. Selon les résultats, nous déterminons si un cultivar est résistant ou non.

2. Suite à divers essais avec des produits biologiques, le bicarbonate de potassium en mélange avec le savon s'avère aussi efficace que les produits chimiques utilisés auparavant. Résultat : une roseraie dans un état de santé très acceptable en fin de saison, malgré la réduction de 90% de l'utilisation des insecticides chimiques et 90% des fongicides chimiques, sans aucune utilisation d'acaricides chimiques. Pas de phytotoxicité, pas de taches sur les feuilles. Il ne faut pas oublier que la roseraie est une monoculture comptant 10 000 rosiers et que le bicarbonate de potassium est utilisé dans le cadre d'un programme de lutte intégrée. À la fin de la saison, les rosiers doivent avoir leur feuilles bien vertes sur le plant, ce qui permettra un bon durcissement avant l'hiver ainsi qu'une meilleure survie au froid.

3. Un anti-transpirant est utilisé dans le programme en plus des autres substances non toxiques pour contrôler l'oïdium. Il est bon d'utiliser divers produits durant la saison. L'anti-transpirant est utilisé au mois d'août lorsque les conditions climatiques encouragent le développement de l'oïdium. Ce produit est pulvérisé sur les cultivars non résistants seulement.

4 La fiche de dépistage est utilisée pour suivre le développement des maladies fongiques et des insectes sur les différents cultivars de rosiers.

5 Une plante indicatrice est un cultivar de rosier non résistant à une maladie fongique. Par exemple pour la tache noire, une plante indicatrice portera les symptômes de la maladie dès le mois de juin et restera affectée par la maladie toute la saison, elle peut même perdre ses feuilles.

6. Un programme de pulvérisation est un calendrier de traitements, un plan d'interventions à effectuer chaque semaine. Ce programme doit être révisé chaque année en fonction des conditions climatiques. Un programme de base est facile à planifier lorsque les différents cycles liés aux maladies fongiques et aux insectes sont bien compris.

Integrated pest management in the rose garden at the Montreal Botanic Garden

By Claire Laberge

One of the great challenges in gardening is the safeguarding of the natural balance between the harmful and beneficial organisms. The health of the plants informs us of the extent to which the various elements in the environment are in harmony. A detailed knowledge of the diseases and insects guides us to what interventions are necessary in the garden during the growing season. But is it possible to cultivate roses and still respect the environment? To this question, Régent Harvey, Horticulturist, responsible for the phytoprotection at the Montreal Botanic Garden answers: "yes". In this article I will share with you my discussion with Régent Harvey, who agreed to evaluate the situation on the research and experiments with integrated pest management in the rose garden of the Montreal Botanic Garden.

- How to define the concept of integrated pest management?

Integrated pest management is a program of biological, cultural, mechanical and chemical procedures to maintain the population of pathogenic organisms under an acceptable threshold. The incidence of fungus diseases and of devastating insects increases with the number of roses. In a monoculture, integrated pest management starts with appropriate cultural procedures and selection of resistant cultivars. Integrated plant health management in a garden is not the work of just one or two people but it is a collaboration of all those working in the garden.

-The rose garden of the Montreal Botanic Garden has a collection of 10,000 roses. How did you pass from the use of the chemical pesticides to the integrated pest management?

In 1995, we began tests of integrated pest management on ten beds of roses (approximately 700 roses). These roses received a weekly treatment of sodium bicarbonate in a mixture with horticultural oil. During the season, oil caused phytotoxicity on the foliage of the roses, which in turn caused a general delay in the growth of the plants. That same year, the spider mite *Amblyseius fallacis* was introduced on the *Rugosa* hybrids to stabilize the population of the devastating spider mite, and the ladybug *Hippodamia convergens* was introduced on certain hybrid tea roses to control aphids. During the following years, we tried out insecticidal soap and potassium and sodium bicarbonates, first separately, and then in a combined treatment. The results being conclusive (1), we gradually

increased the number of rose beds treated with integrated pest management until 2005, when all the rose gardens were utilizing integrated pest management. Among the various products tested during ten years of experimentation and observations, the potassium bicarbonate in a mixture with insecticidal soap proved to be the best alternative solution to the use of chemical fungicides and chemical insecticides (2). Anti-perspirants proved to be effective in preventing oïdium (3). The increased use of integrated pest management led us to introduce a new working tool, a form of detection (4) which enables us to follow the state of the plant health of roses, as well as the effectiveness and the phytotoxicity of our interventions. The assessment of these forms helps us to determine our indicating plants (5) and our strategy of intervention.

-The integrated pest management authorizes the use of chemical pesticides but supports the use of less toxic products and with low-level impact. Concretely in 2007, do you use less chemical pesticides in the rose gardens of the Montreal Botanic Garden?

In 1994, 16 different chemical pesticides were used in the rose garden including 8 fungicides (90% level I, II), 5 insecticides (60% level I) and 3 acaricides (65% level II) for a total active matter of 20kg. In 2005, 2 less toxic chemical pesticides were used, including 1 insecticide (level III), 1 fungicide (level III) and no acaricide for a total of 0.670 kg active matter. In 2005, our programme of pulverization (6) in the rose garden included 18 generalized treatments of which only 3 interventions used chemical pesticides, while the other 15 interventions were carried out with potassium bicarbonate and soap.

The result is a rose garden in a very acceptable state of plant health at the end of the season in spite of a 90% reduction of chemical insecticides, a 90% reduction of chemical fungicides, and without the use of any chemical acaricide. This program of intervention became an annual occurrence since it adapts to the reality of the garden each season. It should never be forgotten that integrated pest management gives priority to the biological control against the harmful organisms while supporting the development of the natural and introduced beneficial organisms. It is thus necessary to choose the plant health products, which have been introduced for the program of prevention, that are most respectful of the natural auxiliaries.

-Integrated pest management starts with a good control of culture. Do you have secrets to transmit to us?

Environmental conditions such as sunshine, ventilation, the ground and the climate (temperature and moisture) influence the dissemi-

nation of the spores in the garden. The cleanliness of the rose beds, planting distances and appropriate annual spring pruning help with the control of black spot, oïdium and rust. Irrigation is an important parameter since a regular watering contributes to the plant's health, and avoids an hydrous stress which would result in both a growth disorder and also weakened natural defences of the rose under the assault of the "undesirable visitors..."

-And the indicating plants, what are their role?

Rose resistance to the fungus diseases varies with the genetic characteristics of each cultivar. In a garden, if a particular rose cultivar is not resistant to one or more fungus diseases, you ensure that the disease is localised and that this cultivar's cultural needs are completely satisfied in order to maintain it in good health. But, following a change of location in the garden, if a rose still presents symptoms of diseases, we have two choices:

- eliminate the too vulnerable rose and to replace it by a resistant cultivar, or
- use as indicating plant

In a rose garden, the various parasites have a tendency to return to the same place and the same plant(s). Why not use this fault to our advantage, because this rose effectively announces the beginning of an infestation? The non resistant cultivars appear on our form of detection.

-For the future, do you have other research projects to improve your integrated pest management program in the rose garden of the JBM?

Our future research will relate to various experiments on the use of bio-fungicides containing *Bacillus subtilis*, Chitosan and garlic, and also with the use of compost tea and biostimulants. The companion planting with the roses, which focuses on the beneficial and repulsive insects, and also on the devastating arthropods is also an interesting avenue which will begin on a small scale, from summer 2007, in the old garden rose section.

1. Each week we monitor the health of the roses on a "detection form". The detection form is a list of cultivars to be evaluated. We follow the development of fungus diseases and insects. The fungus diseases are evaluated with a quotation. Example for black spot on the inferior half of the plant could receive the quotation, 1 = 1-20% affected, the quotation 2 = 21 to 50% affected and the quotation 3 = 51-100% affected. The superior half of the plant could also receive the same quotation. So for a plant there are 6 levels of disease effect. According to these results we decide if the results are conclusive or not.

2. The potassium bicarbonate mixture with soap gives us the same efficacy as the chemical used before among the tests of the various products. Result: a rose garden in a very acceptable state of plant health at the end of the season in spite of a reduction of 90% of chemical insecticides and 90% of chemical fungicides, with no chemical acaricide employed. No phytotoxicity, no spots on the leaves. You must remember that we employ a monoculture with 10,000 rose plants and the potassium bicarbonate is used in an integrated pest management program. We need at the end of the program a rose garden "with green leaves on the plants" so the roses can harden off before winter and survive the frost.
3. Anti-perspirant was used in addition to the other non-chemical substances to control oïdium. In a rose garden it is important to have more than one product to use during the season. We integrated the anti-perspirant in August when the climatactic conditions increase oïdium disease. We spray it only on the non-resistant oïdium cultivars.
4. The form of detection is an evaluation form used to follow the development of the fungus disease and insects.
5. An indicating plant is a rose cultivar non-resistant to disease. An example of an indicating plant for black spot would be one that is affected in June and stays affected all season, even losing leaves.
6. A program of pulverisation is a calendar treatment, a plan of what interventions to do each week. The program may be adapted to the new climactic conditions each year. But a "frame program" is easy to build up when you understand the different cycles of diseases and insects.

Editor's comments on Exhibiting and Judging Roses

The following article has been prepared by Jim Anderson, who for some years was the Chairman of Judges for the Canadian Rose Society. This article is not directed at qualified judges, who will be very familiar with the content of this article. But it is directed at two other groups.

1. People who might have been tempted to try exhibiting but have felt that it is too complicated or competitive for them to attempt. In point of fact, if you follow the procedures which Jim has outlined you will likely derive a great deal of enjoyment in participating. In addition, there are always people around who will give you a hand. And who knows, you might even win!

2. The other people at whom it is directed are people who for a multitude of reasons do not want to exhibit but who enjoy viewing rose shows. But when you look at anything it is nice to know how the decisions were arrived at to determine the winners, and hopefully this article will give you that insight.

So peruse this article, beginning on the next page and then either give exhibiting a try with a couple of your better roses, or increase your enjoyment when you go to visit your next rose show.

EXHIBITING AND JUDGING ROSES

Jim Anderson

The purpose in judging roses, as in any other judging exercise, is to identify the superior specimen(s) in any group of exhibits. This is true whether the exhibits being judged are roses in a rose show or dogs in a dog show. Judging is an art but to assist the judge numbers are usually assigned to the various attributes being judged. In the case of roses, exhibits are judged using 5 attributes and these attributes are assigned point values as follows:

Form	25
Colour	25
Substance	20
Stem, foliage & balance	20
Size	10

For a total of 100 points

In Canada the application of these attributes is spelled out in "The Guidelines for Exhibiting and Judging Roses", a Canadian Rose Society publication which is available from the Society Secretary.

Major Rose Shows are, in most cases, organized by the Canadian Rose Society or one of its Affiliated Societies. The "Show Chairman" is responsible for the organization and smooth running of the show. The show organization is normally responsible to obtain judges and clerks and for the correct placement of entries and for attachment of ribbons etc. The judge will examine each entry to determine its condition and to what degree it satisfies the five attributes while identifying any faults which the exhibit might have. He will deduct points from the 100 total based upon the severity of these faults with the highest scoring exhibit being declared the winner.

Before you begin to select your blooms for entry in a show you should have read the Show Schedule because any deviation from generally accepted standards is spelled out in the Show Schedule.

Remember:- If your exhibit does not conform to the Show Rules then it will be disqualified. Also, do not be tempted to improve the look of your exhibit by using any Foreign Substances such as oil, perfume etc; the judge will find you out and your entry will be disqualified.

There is only one other situation which will result in the disqualification of an entry and this is the one which causes exhibitors a lot of grief. Both Guidelines and Show Schedule call for entries in the One Bloom per Stem classes

to be exhibited without side

buds (*Fig 1*). A side bud is defined as a growth from a leaf axil with sufficient maturity to display the formation of a stem, with or without flower buds.

It is also advisable to keep a record of your varieties and name them on your entry card, this not only helps the judge but it is assurance of the validity of the exhibit should some question arise regarding colour variation or size.

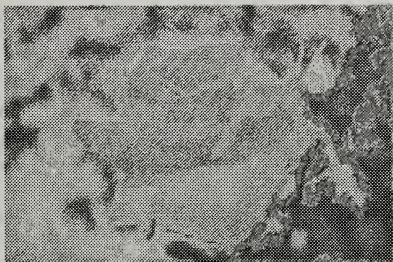


Fig 1. Side Bud

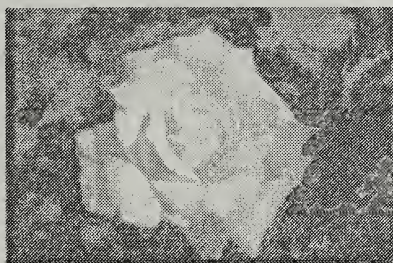


Fig 2. Exhibition Form

For the purpose of competition and judging, roses can be divided into 2 types:

1. Individual Blooms, known as "One Bloom per Stem"
2. Sprays

Bloom form can be further divided into exhibition (*Fig 2*) or decorative (*Fig 3*). Exhibition form is the most perfect phase of a bloom when the bloom is one half to three quarters open with a clearly defined high pointed centre while decorative form is used to describe blooms which do not have a clearly defined centre and whose petals unfurl in a less formal way.

ONE BLOOM PER STEM

When judging "One bloom per Stem" exhibits judges use the attributes as follows:-

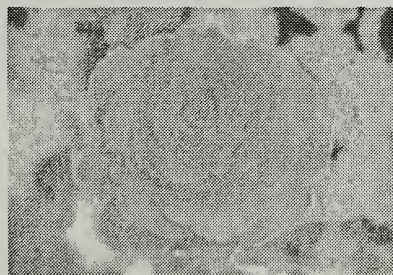


Fig 3. Decorative Form

Form is the most valuable attribute of a rose's bloom. Form may be either exhibition or decorative. Most "One bloom per Stem" exhibits have Exhibition form. Exhibitors should select roses with blooms $\frac{1}{2}$ - $\frac{3}{4}$ open with petals arranged symmetrically in an attractive circular outline with no gaps. When viewed from the side the petals should unfurl from the high centre in the shape of a cone. Varieties with fewer petals should be less open than those with many petals. Blooms with imperfectly formed centres, split (*Fig 4*), confused or balled should not be entered as they will be penalized.

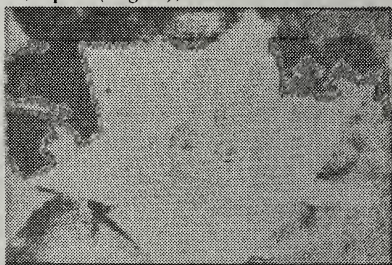


Fig 4. Split Centre

Decorative form blooms are less formal and the most perfect stage is at the $\frac{3}{4}$ open with a circular outline. Single or semi-double varieties are considered to have decorative form.

Decorative form blooms entered in the exhibition classes will be penalized because of their lack of a defined centre. Also exhibits in any of the "One Bloom per Stem" classes showing poor or late removal of side buds will be penalized.

Colour is the second most important attribute and should be fresh, clear and consistent, without blemishes or streaks and typical of the variety. Exhibits with blemishes or spotted by water will be penalized as will blooms with white or green streaks. Remember judges will examine the stamens, where they are visible, as a guide to the freshness of the bloom. Fresh stamens are stiff and brightly coloured while old stamens lose their colour and stiffness. Exhibits with old stamens will be penalized.

Substance is a measure of freshness and constitutes the texture and crispness of a bloom. Roses with good substance sparkle while those past their peak show a loss of texture at the petal edge with a faint browning or discolouration (see also stamens) and will be penalized.

Stem, Foliage and Balance together define the visual impact of an exhibit. Judges will pay attention to these attributes so therefore

select an exhibit which has a stem in good proportion to the size of the bloom, neither too long or too short. A stem between 12" to 16" usually gives best balance. Judges will expect hybrid teas to have at least 3 sets of clean healthy leaves and miniatures 2 sets. Exhibits with overly long stems or short stems (*Fig 5*) will be penalized as will anywhere the prickles have been removed from the stem above the neck of the vase.

Judges will penalize an exhibit portion of a previous stem attached to the primary stem. This is called a "Stem on Stem" (*Fig 6*). Where the Stem on Stem is visible above the neck of the vase the exhibit will be penalized, however if the Stem on Stem is below the neck of the vase no penalty is assessed.



Fig 5. Too Short a Stem



Fig 6. Stem on Stem

Size refers to the actual dimension of a bloom. Bloom size should be typical for the cultivar. Blooms which are too large, or too small for the variety will be penalized as size is measured against what is typical for the variety being judged.

SPRAYS

A spray is a group of blooms, with or without side buds, on one main or lateral stem. They should be typical for the variety and have a symmetrical graceful appearance. The Guidelines specify that sprays of Modern Roses must have at least 2 blooms more than $\frac{1}{2}$ open to qualify as a spray. Modern rose exhibits which do not meet this requirement will be disqualified as they are under Not According to Schedule (N.A.S.)

The same attributes are used when judging sprays with the following modifications

Form when judging sprays is divided into two components:-

1. The form of individual blooms
 2. The overall appearance of the spray
- These components have equal value for all classes except sprays of hybrid teas and grandifloras where preference is given to bloom form.

Sprays (Fig 7) may exhibit all stages of development from green buds to fully open blooms and any variation in between so long as the arrangement is typical for that variety and all should be treated equally because they are the natural growth habit for that variety.

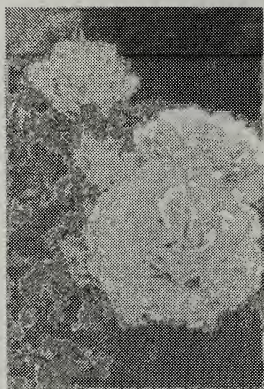


Fig. 7 A Spray

Ideal sprays are generally domed or flat with a regular shape without breaks or gaps. Early removal of unwanted growth or the centre bloom from a spray will allow the later blooms to close the centre gap producing a better spray, evidence of late removal will be penalized.

Colour, Substance, Stem, Foliage and Balance and Size are judged as in "One bloom per Stem" classes apart from the following exceptions: oversize sprays or sprays where late subsequent growth(s) has occurred affecting the balance of the spray are penalized under the Stem, Foliage and Balance attribute while under Size preference is given to the spray with the greatest number of blooms.

Old Garden Roses are judged to the same standards as Modern Roses except that all blooms are considered to have decorative form and sprays need only one bloom $\frac{1}{2}$ or more open and a bud showing colour.

Fragrant Rose classes are judged 60% for fragrance and 40% for form etc.

I would encourage all rose growers to participate in rose shows, talk to the experts who are always willing and eager to share their knowledge and experiences, you will enjoy the fellowship.

Note: Pictures used are from the Canadian Rose Society's "Handbook for Training Judges"

The Canadian Rose Society over the last 50 years

By Ken Flood

On October 6th, 1954, the Rose Society of Ontario, having existed for 41 years, voted to change its name to the Canadian Rose Society. Its reason for being was: "to encourage the love and the growth of roses throughout the Dominion".

In 1955, the new CRS had 1094 members some in every province in Canada. They had 46 affiliated societies (2 in BC; 1 in Alberta; 5 in Quebec and 2 in NS) and seven Regional Directors representing the various parts of Canada. The Governor-General became the Chief Patron and has remained so ever since.

Membership has varied over the years in 1974 it was 825; in 1978 it was 1010, by 1994 it was down to 770. (Rachel I don't have a lot of the statistics any more.)

The CRS continued publishing a "Year Book" each year, which included the "Clearing House", as it had since 1939. In 1955 there were 28 contributors. "The Rose Bulletins" were published seven times a year. The Year Book became The Annual in hardcover in 1960 until 1974. It was published in England and the colour photos in the Annual were donated by the Royal National Rose Society. Not until 1975 was the Annual published in Canada, still with RNRS colour photos, but with soft covers and it continues so to the present day. Only in 1982-84, due to lack of funds, was it reduced to a booklet of less than 100 pages. The World Federation Convention replenished our coffers and Ethel Freeman became its Editor for the next ten years.

The first Rose Shows were held in Hart House at the University of Toronto and Dr. Baillie was Chairman of the Exhibition Committee. They have been held every year since in late June in all parts of the country. In 1973 in PEI, in 1978 a two day show at the new Scarborough Civic Centre, in 1979 at the new RBG building, 1980 at Les Florales in Montreal, in 1989 in Winnipeg, in 1993 in Vancouver. They have been in London, Saint-Lambert and many other places.

On Dec. 11, 1961 the Society was granted a Charter from the Secretary of State for Canada "to further the study of roses, to promote the cultivation thereof, to discover and disseminate knowledge of the conditions favourable to the culture of roses throughout Canada by means of publications, scientific trials, the holding of exhibitions, the maintenance of public display gardens and other activities." From then we were able to give receipts for donations as a Charitable Society.

In 1966, Sam McGredy was the guest of honour at our National Show and he has been a Patron of our Society ever since. The Show was held on June 18th in Brampton to celebrate the Brampton Festival of Flowers. Alas, Ontario had almost no garden roses in bloom at that date after "the worst spring in history", so for the first and only time, florist roses were permitted in the Show. With the help of the Design Section under Audrey Meiklejohn, the local commercial growers and roses flown in from members in B.C., the Show was a saved.

In 1967, 'Miss Canada' an hybrid tea bred by Fred Blakeney and introduced by Henry Eddie of Vancouver, was chosen as our Centennial rose. Fred Blakeney opened the National Show that year in Toronto.

In November 1969 the Board of the Canadian Rose Society under Lt.-Col. F. E. "Mike" Goulding approved a list of 14 rosarians across Canada who would become the nucleus of the corps of judges accredited by the Society and they drew up a set of qualifications for future accredited judges. The first school for judges and exhibitors of roses was held at the Civic Garden Centre on June 22, 1972. It was chaired by Nina Marshall and Bob Keith. By Nov. 1974 after the second part of the school and the practice judging was finished, we had 15 more judges.

In June 1981, 21 attended a new school under Bob Keith and Mary Baillie and the first Guidelines for Judging was published. Again in 1986-87, a school was held with 40 attending.

Jim Anderson and his Committee renewed and updated the course and printed new Guidelines for a school in 1994-95. It was held in Toronto at the Civic Garden Centre with 42 attending, many from outside Ontario. Later in the year he went to Victoria and with Vi Heaslip and her local committee another course was held there resulting in 17 new judges.

In 1996 with the Bermuda Rose Society he conducted a course in Showing and Judging Old Garden Roses. In 1997 in Winnipeg with Betty Biddulph another judging course was held resulting in 6 new judges from the Prairies.

In 1999 in the fall a refresher course in Toronto with particular stress on fall blooms was held. In May 2001, another new Guidelines was published by Jim Anderson and his Committee. There are now rose judges in most provinces. The standard of rose shows has been improved.

Over the years the CRS has published a Colour Classification of Garden Roses. The first was done by Nina Marshall in 1973, with a supplement in 1974, for the first judging school. It sold for 35 cents. In 1976 it was updated by Sylvia Lyzaniwsky for 50

cents, and three more times in the 1980's by Bill Comper and then Mary Baillie. Anne Graber did it in 1993, Margaret Leech in 1997 and Rachel Flood in 2000 for \$5.00.

In 1971 Canada joined the WFRS and Robert Keith and Sylvia Lyzaniwsky were our Delegates to the first Conference of the World Federation of Rose Societies in Hamilton, New Zealand. The WFRS had been founded in 1968 in England at their Fourth International Rose Conference.

In 1975, the Rose Bulletin became the Canadian Rosarian under the editorship of Sylvia Lyzaniwsky with four issues per year. In 1981 it was reduced to 3 issues per year.

In 1976, we were back in England at the WFRS Convention held in Oxford to celebrate the 100th anniversary of the Royal National Rose Society.

Thereafter CRS took an active part in the World Federation, hosting the Convention here in Toronto in 1985 as "Rosecapades". Ethel Freeman was the Convention Chair and Audrey Meiklejohn was the Show Chair. Ethel Freeman, a Past President of the CRS, was President of the WFRS 1995- 97. It currently is made up of 36 rose societies and over 100,000 members.

In 1985, the American Rose Society joined us in Toronto for "Rosecapades", holding their Spring Show as part of the celebration. The first time the ARS has met outside the US since they came here in June 1932 to hold a joint Rose Show at the Royal York Hotel. On that occasion, our Past-President, Col. Hugh A. Rose, won the newly donated Nicholson Bowl for 9 perfect hybrid teas.

In 1981 George Blyth organized the CRS Demonstration Gardens. He and his wife, Elaine, motored across Canada visiting rose gardens all the way along and inviting the best to become a Demonstration Garden for the Society. These have continued to the present time as one of the most praised and envied things the CRS has.

In 1986 Library was reopened at the Graber home in Toronto and packages of books were mailed to rose growers all over the country. This was made possible by the granting of a very favourable rate of postage, called the "Library Rate".

In 1987, the CRS started having Rose Plant Sales in April or May each year. These were held at the Civic Garden Centre and were great fundraisers.. These were organized for the first 8 years by Jim Anderson and then by Ethel Freeman. Rose growers across the country contributed bare root plants at minimal costs and they were potted up at Keith Laver's by a group of volunteers. This ceased to work well once the big box stores moved in to our area and sold roses for \$4.99.

In 1988, the Annual was a celebration of our 75th anniversary counting from 1913 when the Rose Society of Ontario was founded. It was a look back at all the excellent articles that appeared over those years.

In 1992, the All-Miniature Rose Show began at Sherway Gardens, Etobicoke, organized by Cec Lamrock and Paul Graber. Everything was provided by the Sherway Gardens Mall for a two day show. It was extremely popular and raised a good deal of money over the years selling top quality miniature roses in pots from Keith Laver. It has continued to the present time, but changed its focus over the last few years to include other roses and flowers.

In 1995 Goulding Lecture series began, sponsored by Mrs. Virginia Perkins in memory of her father, E.D. (Dun) Goulding. Our first Lecture was held here in Toronto with Wilhelm Kordes telling us the story of the Kordes dynasty. These Lectures continued for ten years with Peter Harkness, Peter Beales in Vancouver, Ken Grapes, Clair Martin, Jacques Mouchotte in Montreal, Roger Phillips, Campbell Davidson in Calgary, Rayford Reddell back in Vancouver and Art Drysdale, the final one here in Toronto in 2004 . Videos were made of each Lecture so all rosarians could hear them.

Our website began in 2000 with Bill Jones as web master and continues today under the guidance of Barbara Clarke and Ethel Freeman. It is linked to numerous other rose societies and web sites. It has recently acquired our own name as a web address (www.canadianrosesociety.org) and will not only be easier to locate but it is much enlarged in its scope. It gets many inquiries daily everyone of which is answered by Barbara Clarke and her committee.

In 2003, the CommPoster (CRS newsletter) began

In 2005 the B of Directors (Board) decided to tackle the long-standing geographical imbalance of the Board members, all being from Ontario. Now, in 2007, recruiting for the Board is being done across the country. New projects are being started on the basis that they must have a countrywide focus. The bylaws of the CRS are being revised to enable annual general meetings to be held anywhere in Canada. The Board is presently working on the CRS fee structure to eliminate any perceived competition between the CRS and the local provincial societies for members. The CRS focus is to work with and help the local societies across the country.

In 2009, the World Federation returns to Canada; this time to Vancouver, BC.

**SUB ROSA:
AN OVERVIEW OF UNDERSTOCKS**
by Jeff Wyckoff

EDITOR'S COMMENTS.

This article is from the 1997 American Rose Annual, and was written by Jeff Wyckoff, the current Vice-President of the American Rose Society. When I was going through the various rose publications looking for ideas for articles for this and succeeding CRS Annuals, I came across this article. I was impressed with it for two reasons. First, it gives a very good history of the development of our technique for using root stocks on our roses. Second, that it makes the startling statement that given the right conditions we probably have more flexibility in what root stock we can use in cold climates like Canada than we had thought. Like many of you I had been convinced that it's Multiflora or nothing. Given the fact that this article is 10 years old it might be dated to some degree, but I believe that most of the information is still relevant.

But what concerned me about the second point was that there didn't seem to be much evidence in the article to support this contention. So I contacted Jeff and stated my concern. He graciously said that he would rewrite the last part of the article just for this Annual, which would give the evidence on which he based his statements. This article might not cause us to change our ideas and practice regarding what root stock we should use, but it might make us think more about it since there might be more complexity to this decision than we ever realized, and we might have more options than we realized .

I would like to express my gratitude to the American Rose Society and to Jeff for permission to use this article. And also my deepest gratitude to Jeff for taking the time to rewrite the concluding part of the article. He must have tremendous demands on his time as Vice-President of the ARS, but I guess it demonstrates that old adage, if you want a job done give it to a busy person, or maybe a dedicated one.

A BRIEF HISTORY

Grafting, the process of attaching a piece of one plant to another, has been an established method of plant propagation for centuries. Theophrastus, the student of Aristotle often called the "Father of Botany," writing in *De Causis Plantarum* about 300 B.C., gives instructions for bud-grafting trees, to include directions for

plastering the scion with a bandage of lime bark and mud mixed with clay to hold it in place. While he also discusses the propagation of roses from seeds and from cuttings, he makes no mention of grafting or budding them. Pliny the Elder, writing some 350 years later in *Naturalis Historiae*, does mention rose propagation through grafting, but gives no details of its use at that time.

By the middle of the 17th century, the grafting of roses had apparently become a fairly common, although not widespread, practice, with species such as *R. eglanteria*, *R. francofurtana* and *R. damascena* (now Summer Damask) serving as understocks. In 1670, John Rea, in *Flora Seu de Florum Cultura*, declared that budded roses were inferior to those on their own roots, a view which, has persisted in some circles to this day. The grafting budding process was then used as a means of starting hard-to-root varieties, rather than as an end in itself; once established, budded plants were routinely forced onto their own roots by the simple expedient of planting the bush with the bud union below ground level.

The lack of quality in budded plants mentioned by Rea and others can be attributed to the limitations of the understocks then in use. With the introduction of better rootstocks in the 19th century, to include *R. canina*, Manetti (*R. x noisettiana manettii*), and others that are still in use today, the quality of budded plants increased, as did the practice itself.

The spread of budding in the U.S. commercial rose industry is well documented in Marlea Graham's "The Hundred Years War" in the 1994 ARS Annual. Much ink, and perhaps a little blood, has been spilled in debating the relative merits of budded vs. own-root roses, and it is not the intent here to add to this total. The fact remains that budding is the chosen method of rose propagation for commercial nurseries of any size the world over. As Dr. Eldon Lyle says, budding "has proved to be the most efficient way to increase the supply."

This "efficiency" could be summarized as: 1) producing the best - the largest and most vigorous - plants possible; 2) in the shortest amount of time, and; 3) with the least amount of expense. Budding will uniformly produce No. 1-grade plants in a two-year period, and will do so with nearly any hybrid scion variety.

ARS members and other rabid rosarians will often accept less than No. 1 grade plants, whether from overseas, Canadian nurseries, own root nurseries or small-scale U.S. budding nurseries, partially because these are new or out-of-the-mainstream varieties, but also because they know that, with good culture, these smaller

plants can quickly develop into large, robust bushes.

The general public, however, those other 20 million people in the United States who grow roses, have come to expect mature No. 1- grade plants, even if they persist in buying them waxed and bagged from the nearest megastore.

It is not too difficult to discern which of these market segments the large growers are going to target.

QUALITIES OF A GOOD ROOTSTOCK

Just as rose growers seek the perfect rose, rose propagators seek the perfect rootstock to put under it. The qualities desired in an understock are many and varied, and relate to all aspects in the chain of commercial production, to include stock propagation, budding, harvesting, storage, shipping, etc. A wish list of rootstock attributes would include vigor, disease resistance, winter hardiness, heat tolerance, thornlessness, thin bark, straight stems, absence of suckers, adaptability to different soils, a well-branched root system, ease of propagation, and possibly a few more. In addition to having a host of desirable qualities on its own, a successful rootstock must be compatible with the widest possible selection of scion varieties. "Compatibility" is a rather imprecise term, but refers generally to the ability of stock and scion to quickly form a strong union, one which will allow the vigor of the rootstock to be transferred to the growth of the budded variety.

The importance of this compatibility cannot be understated. Large scale rose growing is basically farming. Entire fields of rootstocks are budded during an often narrow window of time when they are best suited to receive the buds. Grafts that do not take can often be rebudded, but this adds to the total production costs. Similarly, the entire field is mechanically harvested some one and a half years after budding, and plants that have not attained No. 1 size cannot be left in the ground for a few months additional growth. As No. 1 1/2 or No. 2s, they must be discounted, discarded, or other-wise relegated to less than premium price. A rootstock that does not yield a high percentage of first- time takes, or that fails to produce a consistently high count of No. 1 plants, is doomed to the scrap heap.

In the search for the optimum rootstock, major propagators have found it more efficient (i.e. economical) to settle on a single variety of stock, rather than use two or three which might be compatible to a wider range of scions.

The selection of a stock will be affected by those factors listed previously, but often comes down to that which will grow

best in the soil and climatic conditions of a particular area. Soil acidity/alkalinity, soil composition, temperature extremes, and the amount of culture (water, fertilizer, spray, etc.) needed for prime production make some stocks better suited for hot, dry areas of the country, while other types propagate best in cooler, wetter regions.

The use of only one rootstock means that for those scion varieties not compatible with that particular stock - those that will not produce a high count of No 1s in the allotted time - the nursery must either discard that variety or have it contract-grown for them by another nursery, usually in a different section of the country, using a more compatible understock.

PIONEERS IN ROOTSTOCK RESEARCH / DEVELOPMENT

The search for better rootstocks has been ongoing since the grafting of roses began centuries ago. Two people who have been instrumental in the research and development of understocks in the United States during this century are the late Dr. Griffith Buck and Dr. Eldon Lyle.

Dr. Buck, working at Iowa State University at Ames, became involved in the late '40s in the rose understock project begun some years earlier by Professor T. J. Maney. Over the next 40 plus years he would publish a large body of material on understock research and also breed and select a number of stocks which are still in use today - in addition to hybridizing nearly a hundred hardy rose varieties (see "Griffith Buck- His Roses" by Morris Anderson, 1996 ARS Annual).

Dr. Eldon Lyle, a past president of the American Rose Society, served as a plant pathologist for the Texas Agricultural Experiment Station and later for the Texas Rose Research Foundation. He has been involved in root-stock research and selection in the Tyler, TX, area since the 1930s and has also written extensively on the subject. The American rose industry, as well as all of us who grow and love roses, owe both of these men a large measure of gratitude.

UNDERSTOCK VARIETIES

There is an extremely wide range of species, species variants and near-species roses that have been used as understocks at some point. A survey of the principal varieties that are in use today, both in the United States and around the world, would include:

R. canina, the "Dog Rose." This has been in continuous use as a rootstock for probably the longest period of time, being first recommended in 1824. Although it is seldom, if ever, used anymore by U.S. nurseries, various strains of canina continue to enjoy consider-

able popularity in other countries. Pfander's Canina is used extensively by Harkness Roses and by other British and German growers, while strains such as *R. canina inermis* (Gamon's), Schmidt's Ideal, Entree, Veendam, and others are used sporadically; some 10 - 15 percent of Canadian roses are budded onto canina strains. While they are reportedly rather difficult to germinate from seed, canina stocks are nevertheless propagated primarily in this manner, rather than from cuttings.

Dr. Huey. Classified by the ARS as large-flowered climber, Dr. Huey was introduced in 1920 and is a cross between Ethel, a rambler seedling of Dorothy Perkins, and Gruss an Teplitz, a rose of complicated ancestry now classed as a bourbon. Dr. Huey supplanted Gloire des Rosomanes (Ragged Robin) at Jackson & Perkins and other California growers in the 1940s, and is now the rootstock of choice in California, Arizona and into Texas. Dr. Huey is well suited for rose production in the alkaline soil and irrigated field conditions found in much of the southwest, is compatible with most hybrids, and can be budded over a fairly long period. Unlike most other stocks, the use of Dr. Huey is confined to the United States.

R. laxa. Officially, *R. coriifolia froebelii*, it is also known as *R. canina froebelii*, and occasionally *canina laxa*. Chris Warner, the English rose breeder and nursery-man, estimates that 95 percent of British rootstocks are laxas. It is also used on the European continent and in Canada, but is seldom found in the United States. Like the caninas, it is propagated primarily through seed.

R. multiflora. This is probably the most-widely used and geographically distributed under-stock, and that with the most strains or variants. The majority of Canadian roses are budded onto *multiflora japonica inermis* (Japanese thornless); English growers use *R. multiflora* and a strain known as *Superba*; selections such as Brooks, Tate, Welch and Clarke have been used in Texas and other parts of the United States while a strain known as Burr is used by Edmunds' Roses in Oregon. De la Grifferaie, a hybrid *multiflora*, is still widely used as an understock for standards. *Multiflora* variants tend to do best in acid soil, are blackspot resistant, quite winter hardy and are compatible with a wide range of scions. Canadian and European *multiflora* stocks are produced from seed, while those in the United States come from cuttings.

Manettii. (*R. x noisettiana manettii*, also *R. chinensis manettii*). Once a staple for U.S. field-grown roses early in this

century, *Manettii* is now used, along with *R. odorata*, primarily as an understock for greenhouse roses. About the only retail nursery that still uses *Manettii* as their principal stock is Wayside Gardens. *Manettii* is perhaps the least cold-tolerant of all the major understocks used in the United States.

Fortuniana. (Also *R. fortuniana*, *R. x fortuniana*, *R. banksiae fortuniana*, Double Cherokee Rose). A rose of uncertain parentage (supposedly *R. banksiae* X *R. laevigata*), this has become the stock of choice in Florida and much of the southeastern U.S.

Its attributes include a vigorous and spreading root system, tolerance of sandy soil and drought conditions, and resistance to nematodes and various soilborne diseases. Its drawbacks are that it is difficult to propagate, is only moderately winter hardy, cannot be cold-stored, and therefore plants on *Fortuniana* must be shipped potted rather than bareroot, and is difficult (but not impossible) to bud graft, and hence is often cleft or saddle grafted. While a number of rosarians in warmer parts of the country swear by the vigor, size and health of roses on *Fortuniana*, its budding and storage limitations probably keep it from being commercially viable on a large scale.

ROOTSTOCK SELECTION AND PROPAGATION

At this point, some explanation should be offered of the terms strain, selection, variety and variant, all of which have been used to denote understock types as they relate to a broad species family, such as the caninas or the multifloras. One of the distinguishing features (although not quite a definition) of a rose species is that it will breed "true," meaning uniformly like the parent, from seed. This contrasts to hybrids, in which the seeds from a single self or cross-pollinated hip can result in widely varying offspring. However, the trueness of this sexual (from seed) reproduction is not the same as the clones - genetically identical plants - that result from asexual reproduction methods such as grafting/budding, rooting or tissue culture.

Species seedlings can vary slightly to moderately with regard to the physical characteristics of the plant and/or the bloom. These variations are not sufficient to constitute a classifiable species type, but yet are highly significant to nurserymen looking for understocks. Features such as an absence of prickles, thinner bark, straighter stems, a better branching pattern of the roots, etc. are all highly desirable understock traits.

While some rootstock development is done through crossing different species and strains, the majority is done sim-

ply by germinating the seeds of a species variety, observing, inspecting and testing the seedlings for useful variations, and then selecting those that show improved qualities. Thus, Burr, Clarke and Welch are all relatively small strains/variants/selections of *R. multiflora*, and are listed in Modern Roses under their common names (e.g. Burr's Multiflora) rather than as taxonomic forms of *R. multiflora* (e.g. *R. multiflora carnea*).

In the United States, selected understock strains are cloned, i.e. propagated through cuttings. However, in Northern Europe and Canada, nearly all roses are budded onto stocks produced from seedlings. Most English and Canadian nurseries routinely import seedling stocks from Holland rather than growing their own. The primary reason that these northerly rose-growing areas propagate from seedlings is that their growing seasons are often too short to be able to root cuttings and get them big enough to bud in one year's time, something that is not a problem in most parts of the United States.

SEEDLINGS VS. CUTTINGS

Seedling rootstocks have been a major subject of discussion in the last few years, since a plant virus cannot, by all scientific accounts, be transmitted or passed on through its seeds. Thus, stocks grown from cuttings of a diseased plant will be infected, while stocks grown from seeds of that same plant will not.

Considering the virus diseases (usually lumped together as "rose mosaic") that continue to plague the U.S. rose industry, despite their attempts to eradicate them, Canadian and European roses on seedling stocks are seen by many as a disease-free alternative - provided that the scion wood is itself virus free - for many modern as well as older varieties. In addition to being virus-free, seedling understocks have the capability of producing very good plants; Dr. Buck reported that "an excellent plant with a natural root system which transplants readily is the result [of seedling stocks]".

So why don't U.S. growers bud onto seedling, rather than cutting understocks? There are two major disadvantages of seedling stocks from a commercial point of view. The first is their variability. The slight variations in species seedlings discussed earlier are often enough to cause problems, not only in the rooting and budding of the stocks, but also in the growth and performance of the scions. Uniformity of plant size and quality are highly desirable in the rose industry, and cutting (cloned) stocks are much more uniform and dependable than seedlings.

The second disadvantage is that plants on seedling stocks are less efficient and more expensive to produce. Tom

Carruth, director of research for Weeks Roses, lists the following comparative points:

- valuable field space is used for two years to produce a No. 1 plant on cutting-grown stock vs. three years to produce a comparable plant on seedling stock.

- considerable soil manipulation and higher labor costs are required to produce a budable shank on a seedling plant. In addition, some seedling stocks are much more subject to incurable suckering.

- on Dr. Huey, there is a much higher percentage of scion "take" when budding onto cuttings as opposed to seedlings.

European and Canadian nurseries are apparently able to deal with the problems of variations in their seedling multi-flora and canina stocks, and have also seemingly worked out the economic aspects of seedling propagation to their satisfaction. Despite the increasing demand in the United States for disease-free plants, however, seedling understocks do not appear to be an option among the large commercial growers.

EFFECTS OF UNDERSTOCKS ON SCIONS

Other than providing it with a jump-start, as it were, what properties or benefits, if any, does the rootstock pass along to the scion variety? Does the rootstock make the rose, or do rose gardeners put too much "stock" (excuse the pun) in the understock type?

Dr. Lyle warns against overestimating the function of the understock when he says: "It is easy to confuse cause and effect. Often the root system is blamed when bushes (are) not doing well ... The roots respond to whatever kind of top-growth there is, and so the top and roots are interdependent on each other."

Griffith Buck is somewhat harsher on those who would set too much store by the stock: "This.... has led to the accumulation of a number of ideas, many bordering upon the mythical, attributing powers to the understock. No doubt, the reasons for their persistence lies ... partly in the psychic needs of gardeners for a mysticism to which to attribute the inexplicable."

According to Dr. Buck, the prime effect of the understock on the scion is the transmission of vigor. A successful graft between compatible stock and scion varieties will allow the unimpeded flow of nutrients up from the roots, resulting in vigorous scion growth, and will give the plant improved characteristics normally associated with good nutrition - increased

flower production, brighter bloom colors, increased petalage, better form, longer stems, healthier foliage, etc.

Two highly significant (and highly debated) areas of potential stock scion transfer are cold hardiness and disease resistance; on these, Dr. Buck states:

"In roses the understock does not appreciably affect the hardiness of the scion, with the possible exception ... of the canina understocks. The inherent cold tolerance of both stock and scion are left unchanged by grafting. The **apparent** (author's emphasis) effect of increased scion hardiness obtained by grafting to a hardy understock can no more be attributed to understock than to such cultural methods as attention to fertilization, irrigation, and foliage retention....Disease resistance in the understock affects the scion variety in a similar manner. It is unfortunate that the blackspot tolerance of the multiflora stocks is not transmitted to the scion ... The effect of using disease-tolerant understocks is an incidental one."

So, if the understock does not impart any additional cold hardiness to the scion variety, then what are we to make of frequently-heard complaints that: 1) some rootstocks are better suited to certain types of soil than others; 2) hybrids budded on one type of rootstock die during a hard winter while those on another type do not, and; 3) roses on certain stocks, particularly Dr. Huey, simply languish and decline in certain areas of the country. Let's look at each of these individually and see what we can conclude.

"Soil-Indexed" Rootstocks

The choice of budding over growing roses on their own roots, as well as the choice of rootstock itself, is made for only one reason: economics. Commercial rose growers, like all farmers, will choose the methods that will give them the most profit. This is usually some combination of short-term profit – whatever is cheapest to grow the product and get it out the door – and long-term profit – doing what is necessary to keep the customers satisfied. Because of high labor costs associated with budding, California growers like Weeks and J & P have turned to propagating more varieties on their own roots. The first year that J & P introduced their "new generation" roses, e.g., own-root plants, the bushes looked like "typical" own-root offerings – small, 6-12 month old plants, but with prices comparable to their #1 budded plants. This attempt at short-term profit apparently did not resonate well with their customers, because within a couple years their "new generation" plants were comparable in size to their budded stock.

The choice of rootstock for California growers is based on

similar short and long-term considerations: short-term, the ability to grow the greatest number of #1 grade plants in the allotted time period, and at the same time be compatible with new (and old) scion varieties; long-term, to produce plants that will grow well over a reasonable period of time for the greatest number of their customers. Despite constant testing of a variety of different understocks, Dr. Huey remains the stock of choice for growers in California and, more recently, in Arizona, based first of all on their particular combination of soil type, temperature, water availability, and perhaps other factors, and secondly on the ability of Dr. Huey roses to grow well in nearly all areas of North America.

Many rose growers point out that rootstock that grows well in California soil does not necessarily grow well in North Carolina, New York, or Minnesota soils. This is likely true if the soils in these other areas are natural and unamended. However, most rose hobbyists do not have to, and indeed do not, grow their plants in natural soil. One of the first lessons rose growers learn from society bulletins, rose books, or wherever is how to overcome the limitations of natural soil by such things as building raised beds, adding quantities of organic material, adjusting the pH, avoiding walking in the beds, etc. It is my contention that if rosarians in most areas of North America were to studiously apply and constantly monitor and maintain these soil improvement methods, Dr. Huey and its various scions would grow well for them.

Winter-hardy rootstocks

Dr. Griffith Buck, whose research on rootstocks at Iowa State University is the benchmark in this area of study, reports on the following stocks, in descending order of winter hardiness: canina, multiflora, Dr. Huey, odorata, and manetti. However, his articles on rootstock contain a number of caveats that need to be taken into consideration:

“*R. multiflora* and *R. canina* are variable species, and their selections can vary widely in hardiness.”

Although no temperatures are given, he states that Dr. Huey is hardier than generally believed.

Laboratory experiments have determined the exact temperatures at which various rootstocks will die. However, these do not take into account the numerous variables that can occur in rootstock death under “real” conditions, e.g. soil type, depth below soil surface of bud union and/or the roots themselves, amount of water in the soil, prior freezing-thawing cycles, plant vigor, etc.

Unpublished reports from prominent rosarians in the U.S. shed additional light on rootstock hardiness. For example, Paul Zimmer-

man in Englewood, Ohio (USDA Zone 5b, average annual minimum temperatures -23° to -26° C.) reports that when adequately cared for and winter protected, varieties on fortuniana have come through several winters in reasonably good shape.

All of this indicates that establishing why a particular plant died as a result of a cold winter is a complicated, and likely next to impossible, task, certainly one that goes far beyond the type of rootstock upon which the scion was budded. It's always easy to blame the understock, but in all likelihood the causes are some combination of inherent lack of hardiness in the scion variety, coupled with poor cultural practices. Dr. Buck has mentioned that the roots of a budded plant can die during a hard winter while the scion variety remains alive, but this would seem to be the exception rather than the norm. The plethora of Dr. Hueys that bring forth their small, deep red blossoms around North America every spring attest to the fact that the great majority of winter-killed roses are in fact winter-killed scions. Even in those instances when rootstock of whatever kind is killed in hard winter, poor cultural practices, such as shallow watering that brings the roots up closer to the surface, could be contributing factors.

Regional Rootstocks

It appears to be a well-established phenomenon that roses on Dr. Huey decline dramatically in vigor after 2-3 years in Florida and other areas of the southern United States. This decline is usually blamed on sandy soil and/or root nematodes, and has led to a number of nurseries now budding or grafting onto fortuniana stock. Less well documented, not to mention less well explained, is a similar loss of vigor and performance to be found in Dr. Huey plants in the northern U.S. and Canada. The problems in trying to determine why this would occur are various, and include the following:

1. Lack of authoritative and comparative research on Dr. Huey. Since this rootstock is used only in the California and Arizona growing fields, European and Asian-based research simply does not take it into consideration in their trials. A brief internet scan turned up rootstock studies on susceptibility to rust, crown gall, and root-knot nematodes, salt tolerance, and suitability for cut flower production, yet not one of these included Dr. Huey as one of the test subjects.
2. cursory or incomplete reports on problems encountered with Dr. Huey roses. For example, an article in the April 2004 bulletin of the Peninsula Rose Society in Victoria, B.C. reported simply that a number of plants from Star Roses on Dr. Huey "all failed to thrive after their first

year". No mention was made of weather and cultural conditions that could have affected this "failure".

3. Conflicting or incompatible empirical evidence. Climate and weather conditions in Victoria, B.C. are not that much different from those in the Puget Sound area of Washington, yet plants on Dr. Huey do very well here, and there were no abnormal conditions during the winter(s) preceding 2004 that would have massive "failures". As well, reports on plant inspections for such things as root rot, abnormal or stunted development, nematodes, etc. for failed Dr. Huey roses in the Midwest and eastern Canada and the U.S. are also difficult, if not impossible, to come by.

The possibility of disease problems, such as rose mosaic virus, with Dr. Huey can be fairly readily discounted, since these would have shown up in warm weather U.S. locations as well, which they have not. The U.S. rose industry's efforts in cleaning up their rootstock over the last 10 years seem to have been reasonably effective, based on my own experience and that of other growers in the area. A final possibility would be that since Dr. Huey is well adapted to alkaline soils, the acidic soils of higher latitudes impedes its vigor and growth. However, it would seem that an amended soil with an adjusted pH would effectively negate this potentiality. Probably the only means of getting at the "Dr Huey conundrum" is through a thorough analysis of both the soil and the plant for "failed" Dr. Huey roses in a number of growing areas.

Perhaps the good news in all of this is that with Weeks Roses aggressive marketing, most of their excellent varieties of late, such as 'Marilyn Monroe', 'Betty Boop', and 'Ebb Tide' are now available from Canadian nurseries on multiflora understock; hopefully other large U.S. growers will follow suit. As the economics of budding become more restrictive in the Pacific Southwest, we may see more and more new (and old) varieties being grown and marketed on the own roots, thereby bypassing the "proper rootstock" problem altogether.

HOW PLANTS ARE FED HOW PHOTOSYNTHESIS, RESPIRATION, FERTILIZERS ORGANIC MATTER AND pH INTERACT

By Ken McFarquhar

This is going to be a story of the processes and materials which a plant uses to feed itself, and everything else on earth. What this means is that without plants everything on earth would starve to death. In addition we would have no oxygen to breathe, and so maybe the lack of food wouldn't matter.

We start with photosynthesis. This is the procedure by which a plant makes the food which it needs to survive and carry out its functions. The food is manufactured in the chloroplasts, which are situated in the leaves, and they are one of what are called organelles in a plant. The input to the process is sunlight and carbon dioxide from the air, and it is facilitated by chlorophyll, which is secreted in the chloroplast. The output from the process is sugar, which is circulated throughout the plant and stored where it will eventually be needed. Also it is changed from sugar to starch for storage purposes. The other product is oxygen, and we all know why it is important

The process by which the plant changes the food into energy is called respiration, and it occurs throughout the plant. Respiration is really the reverse of photosynthesis. In this process the starch is changed back to sugar, and then the sugar is combined with oxygen to produce water, carbon dioxide and energy. The water and energy are used by the plant and the carbon dioxide is released into the air. Respiration can occur day or night since it doesn't require light, but photosynthesis can only occur in light, i.e. during the day or under artificial light. Also while photosynthesis occurs only in the leaves, respiration occurs in every living cell, where the food is actually needed.

A question that now arises is, if the plant produces all of the food that it needs by these two processes, why do we have to fertilize our plants? The answer is they facilitate the photosynthesis and respiration processes. And each element in a fertilizer contributes in its own unique way to these processes. For example nitrogen, the most important element, provides protein for the building of plant tissues, and contributes to the manufacture of chlorophyll.

Now, where does organic matter fit into this picture? Organic matter is any decaying plant or animal matter, and it determines the level of fertility of a soil, i.e. the amount of nutrients that are actually available to the plant, as explained in the following description. The nutrients in the soil have either a positive or a

negative charge, those with a positive charge are called cations and those with a negative charge are called anions. Collectively they are called ions.

The soil is made up of particles of various sizes, called clay, silt and sand, in order of size, from smallest to largest. These mineral particles aggregate to form what are called soil colloids. There are two types of colloids. The first are composed solely of mineral particles, and the number of colloids increases with decreasing size of the mineral particles. The second type includes humus as well as mineral particles, humus being the final product in organic matter breakdown, and this type of colloid is much more chemically active than the mineral colloids. As a result they are more important in promoting the fertility of the soil. So the most valuable colloids are those involving a significant percentage of clay particles and humus. Soil colloids have a negative charge.

Soil nutrient-holding ability, or fertility, or the amount of fertilizer in the soil actually available to the plant, is called the cation exchange capacity. It measures the number of cations on exchange sites of soil colloids. The more colloids in the soil, and the more of them involving humus, the higher the cation exchange capacity. Cations are adsorbed to soil colloids. The most usual cations to be adsorbed to soil colloids are hydrogen, calcium, magnesium, potassium, sodium and ammonium.

On the other hand anions, since they are the same electrical sign as colloids, are not held on exchange sites of colloids but combine with other nutrients to form a water-insoluble material. An example is phosphorus, which occurs in the soil as a phosphate ion and combines with calcium to form insoluble calcium phosphate. The calcium phosphate must be dissolved by naturally occurring soil acids to release the phosphorus for plant use.

And finally we must consider the pH of the soil. pH measures the acidity or alkalinity of the soil. A neutral soil has a pH of 7, lower values indicate an acid soil and higher values an alkaline soil. Chemically the pH is determined by the balance of hydrogen and hydroxyl ions, with hydrogen making a soil more acidic and hydroxyl making it more alkaline. Most plants perform best in the range 6-8, i.e. moderately acidic or alkaline.

Why does it matter what the pH of the soil is? Simply because it determines the availability of the various fertilizer elements in the soil to the plant. For example, copper, iron and manganese are less available in highly alkaline soils, whereas nitrogen-fixing bacteria are inhibited in highly acidic soils.

Mushroom Compost:

What is it and what does it do?

By Carol Green

In May of 2004 I first heard the term “mushroom compost”. It had been around for a long time but was unfamiliar to me. Several people at the Annual MCRS Picnic at the Weed Patch were touting the great results they had had after applying this material to their rose beds.

The subject has come up several times at recent MCRS meetings and many members have expressed interest in knowing more about this soil amendment. Here is a brief explanation of what Mushroom Compost is made up of and what it can be used for.

Mushroom Compost is the residual waste generated by the mushroom production industry. The compost generated by the most local plant to Marion County is broken down roughly as follows; 60% wheat straw, 10% poultry waste, 5% cottonseed meal 5% cottonseed hulls, 1% urea, 4% gypsum 5% Canadian Peat Moss, 2.5% mushroom spawn (grain/seed) 2.5% mushroom supplement (soy based), 5% limestone

This material remains consistent, has a nearly neutral PH, is weed free, nematode free, and has been sterilized. Because mushroom farmers rarely use pesticides their compost is usually free of heavy metals and pesticide residue.

When preparing for a mushroom crop the above list of materials is mixed together with water for about 11 days. The mixture is pasteurized at between 130 and 160 degrees and allowed to develop for another week. Mushroom spawn or seed is then added and everything is topped off with Canadian Peat. The mushrooms are grown in trays inside climate controlled rooms. The entire process takes about 12 weeks.

After the mushroom crop is harvested the compost is pasteurized again then removed from the trays. The mushroom farmer then starts another crop but begins with all fresh materials. The previously used growing medium has to be disposed of, and this is where our luck begins. Spent mushroom compost is reported to have a PH of 7.3, Nitrogen of 124 ppm, Phosphorus of 80 PPM and Potassium of 4930 ppm. This is not a guaranteed analysis.

Due to the high demands of the mushroom industry, waste remaining from their farming produces a high quality and consistent by-product that represents to rosarians an excellent source for soil amendments and slow release fertilizer.

Fortunately for those of us in Central Florida, mushroom compost is usually available free. In fact, producers look for opportuni-

ties to dispose of large quantities of the material.

Uses for mushroom compost include; top dressing flower beds and vegetable gardens, mixing with soil at a 50/50 ratio, spreading over the canopy of trees and shrubs, or even spreading over lawns. Planting directly into mushroom compost is not recommended.

Since the PH of this material is on the high side for roses, users are encouraged to do a PH test after planting to determine whether lime or sulfur is needed.

A great many Central Florida rosarians are currently using mushroom compost for the following reasons;

- ◇ It helps reduce soil born diseases.
- ◇ It is highly organic and fertile.
- ◇ It represents a very inexpensive slow release fertilizer.
- ◇ It is a soil amendment free of diseases and weeds.
- ◇ It improves moisture retention.
- ◇ It may reduce some need for commercial fertilizers.
- ◇ It may lower requirement for lime by raising PH.
- ◇ It improves the soil's ability to hold nutrients for uptake by plants.
- ◇ The organic nature cools in summer and warms in winter.

So, there you have it. Not a scientific analysis but a simple overview of what it is and what it may do. It's close, it's free and it has proven results for many fellow rosarians.

Mushroom compost is also available commercially at most garden supply centers. For more information, visit the **American Mushroom Institute** on the internet.

EDITOR'S COMMENTS

The above article is from the Marion Country Rose Society Newsletter, Rose Rambler. It is written by Carol Green, who is the editor of that publication. It should be noted that this article received an award from the American Rose Society as one of it's outstanding adrticles of the year. I would like to express my gratitude to Carol, the Marion Country Rose Society, and the American Rose Society for allowing us to republish this article.

I personally have used mushroom compost for the last 3-4 years as the primary source of organic matter for my roses. Every year I purchase 3 cubic yards of this material and spread it through-

out my rose beds. Previous to that I used to purchase manure, but the company with which I deal stopped carrying it.

I started using mushroom compost with some trepidation since I had heard some negative things about it, e.g. that it contained a lot of weeds. But since I started using it I have not noticed a particular increase in my number of weeds. I was pleased to see these positive comments in Carol's article, but since there still seemed to be an undercurrent of negative feeling about it I decided to do some independent research.

Clarifications. As Carol points out it is probably not aptly named since it is not the remains of mushrooms but the residual of what mushrooms were grown in.

I did this research on the internet and as expected I got a mixture of good and bad reports. I will summarize them below. The negative comments are as follows.

1. There is not much nutritional content. But this is likely not a major issue since our use of it will be for the humus it can provide and not the fertilizer value.

2. There is a high salt content. The claim is the salt comes from two sources, the manure, and the mushroom deposit after they finish feeding. If true this would be a problem if the salts weren't leached out, and a major job if they had to be leached.

3. It is not cost effective. But I personally know of no cheaper alternative.

4. Good if used in small amounts, but shouldn't use in large amounts.

5. If applied yearly it may produce excess nitrogen phosphorus and potash in the soil. But this contradicts the claim that there is not much nutritional content in it.

The positive comments are as follows.

1. It is as excellent soil conditioner

2. It can be used in reasonably large amounts.

3. It is pasteurized and so will not contain any pests.

4. When used as a mulch it will hinder weed germination.

Conclusion

It would appear, to the extent that this investigation is adequate, that the major difficulty, if one exists, is the presence of salts. So like many things, until there is a thorough investigation, we will have to base it's use on our own experience.

ODDS AND SODS OF INFORMATION.

By Ken McFarquhar

The idea for some of the items in this article came from reading the advice columns of Dr. John T. Dickman in the American Rose magazine, the monthly magazine of the American Rose Society. The source of his material is letters from readers who ask questions about issues which are puzzling to them, and Dr. Dickman attempts to answer them. Hopefully at least some of the issues will be of use to some of the readers.

1. A common question I get runs something like this. I have a rose bush that hasn't bloomed for the last 2-3 years. Why? The most likely reason is that for some genetic reason this particular plant just can't bloom. It is impossible to check if this is really the reason, but possible other reasons are too much nitrogen or the presence of rose midge. But both of these causes should affect other plants as well, and we should be able to see the midge on the plant if it is there, but this particular plant might be more susceptible. Possible solutions to the problem might be a new location, or pruning back as though there are blooms. But the likely ultimate solution, after a year or two, will be to just remove the plant and replace it.

2. A common question is, can you plant a new rose where an old rose has been grown. It has been my experience that this can be done in safety. Since one of the main characteristics of roses is their habit of depleting the soil of organic matter you should add a generous amount of new organic matter before replanting. If you don't do this you will likely have problems. In addition, ensure that the pH is still within the correct range. If you still have difficulty after taking care of these two problems it likely indicates an unusual condition in the soil e.g. a disease organism.

3. A favourite part of the fertilizing program for many rosarians is epsom salts. But is it worth the trouble and expense of adding it? Epsom salts was first discovered in the mineral waters of the springs in Epsom, England. Other than for feeding roses it is used as a laxative and as a bath additive for tired and aching body parts. The reason it is part of our fertilization program is that it is an excellent source of magnesium, which is one of the most important of the so-called micro-elements. Magnesium is important for seed germination, chlorophyll production and nutritional uptake of other elements. Epsom salts is sold in the form of magnesium sulphate and there are no additives. It is inorganic since it is a mineral sub-

stance. It is manufactured from dolomitic limestone in which the carbonate element is chemically converted to sulphate. It is immediately available to the plant, will leach away quickly and so won't accumulate in the soil. It is a valuable addition to your fertilizing program unless your soil has adequate magnesium, in which case you will be wasting your time and money. So get a soil test first.

4. Granular fertilizers have a very long shelf-life and so it is unlikely that any you have will be ineffective.

5. When deadheading how far do you cut back? A common rule is to prune down to a 5-leaf cluster. But that is simply a rule of thumb. You want to prune down to where the stem is thick enough to support a new rose, usually at least the thickness of a pencil. But on the other hand, the further down you cut the more leaves you lose and the less food that is produced for the use of the plant. So, like most things in life, it's a compromise, and involves decision on your part.

6. What is the cause of a weak peduncle? It is for one of four reasons, genetic, water in the bloom after a rainstorm, insufficient water pressure in the cell walls of the peduncle, or insufficient food to produce a strong peduncle. We can't do anything about the first cause, and we can dump the water out for the second. As regards the third, it is because insufficient water is reaching the peduncle from the roots, which simply means that the rose is transpiring more than it is being provided with water from the roots. Insufficient water in the cells of the peduncle means that they have insufficient cellular pressure to do their job. The simplest explanation is the lack of sufficient water being added to the rose bed, and the obvious solution is to get a better watering schedule. Another possible explanation is problems with the roots impairing their ability to absorb sufficient moisture even though it is present in the soil. The fourth reason could be caused by poor drainage. If that is the case the plant might not have enough soil oxygen to carry out the respiration process effectively to feed the roots and thus make them healthy enough to absorb the soil nutrients, which in turn are sent to the leaves to manufacture the food. Another possible cause is a lack of fertilizer, especially potassium. But what this analysis of this problem indicates is the huge degree of interaction between the many elements involved in plant culture.

7. There is a project ongoing to compile a list of all Canadian hybrid roses. The most recent information which I have indicated that they have found about 700 roses, of which only about 350 are known still to exist. The list of roses can be viewed on the National Roses Canada website <http://www.helpmefind.com/rose/index.php>. Further information available nearer project completion.

RECENT ROSE READS

*Anne Graber
Canadian Rose Society Library*

We Canadians love our four season's climate? After the roses are put to bed in November, it is time to catch up on our reading. Here are a few of the rose publications I have enjoyed recently.

Otherwise Normal People, Inside the Thorny World of Competitive Rose Gardening by Aurelia C. Scott of Portland, Maine, published by Algonquin Books of Chapel Hill, N.C., 2007, 236 pages, \$19.10. This is a wonderful lighthearted look at rose shows and the exhibitors who keep them going. Some of you will recognize familiar faces like Frank Benardella, Stephen Scanniello, Robert Martin, who wrote "Showing Good Roses", the bible for the new exhibitor, Lily Shohan of Old Garden Roses, Tommy Cairns, John Mattia and above all Clarence Rhodes – the master inventor of the imaginary "Secondary Products Company". The members of this Company can turn almost anything into a useful rose garden tool from old fridges to forty gallon garbage cans to coat hangers as a perch for sparrows to eat Japanese beetles off his roses.

All of you will chuckle, perhaps in self-recognition, at the antics that we go to in order to get our roses to a Show. It will remind you of the many friends made through roses. One might be an orthopedic surgeon or a house painter, but he knows his roses and that's all that we talk about. I may speak little Spanish and he little English but the love of the rose is all we need to communicate. This book is a delightful read for a snowy night!

A Year of Roses, by Stephen Scanniello, published by Cool Spring Press, Tennessee, 2006, 192 pages. \$20.45. This is a revised edition of a 1997 book of the same title – indeed it has been completely rewritten. It looks the same as the 1997 edition, but make sure you are getting the new one. I like this edition far more than the original one. Either Stephen or I, or both of us, have learned a lot in the last ten years. It is a book to read through by the fire in the winter and then read again month by month to check on the chores and pleasures of roses that each month brings.

It is full of tips and ideas like cutting off the first two fingers and

half of the thumbs on an old pair of gloves to make it easier to tie up a Rambler and still have some protection for your hands. His writing is clear and detailed, laced with humour – “Leave some of your blood behind, it feeds the roses.” He clarifies the difference between modern hybrid teas and the old original tea rose. Many rose writers carelessly use the term “tea rose” when they mean “hybrid tea rose”. He makes pruning sound so simple: Cut out the dead and diseased wood, some old canes, shorten the laterals and each main cane and that is it!

Watch for Stephen’s latest book due in November 2007 about the origins of rose names – no title yet.

Nouvelle Encyclopédie des Roses anciennes, by François Joyaux, published by Les Éditions Eugen Ulmer, Paris, 2005, 335 pages, 49.90 Euros. We bought this book at the Heritage Rose Conference in June from M. Joyaux himself and have been luxuriating in it ever since. I can’t understand every word, but the photographs are so gorgeous and every rose is accurately named. Names which are the same in both languages. There are many photos of the early plant explorers and those who bred from what they brought back and it changed European roses for ever. I particularly enjoyed the Appendices with all the details on the shapes of hips, leaves and thorns and where they occur on the cane, including a complete list of the breeders of the XIXth century and an extensive Glossary.

In seven chapters he follows the rose through from species to the early roses of the XVIth and XVIIth centuries, through the changing tastes of the XVIIIth century through Boursaults, Scots, Portlands, Ayrshires and Penzances to those brought home from China and North America to finally the beginnings of the hybrid teas, polyanthas, climbers and rugosas. It really is an encyclopedia.

There is an amazing amount of information on each rose and on every aspect of rose history. On the species roses, Joyaux describes how they were named – *Rosa arvensis* Huds. All roses start with their botanical name of ‘Rosa’ and their second name is given by the person who first described them, i.e. ‘arvensis’. This name was given by William Hudson (1730-1793). On page 20 he lists those who first gave a rose its name and when they did so. I have often puzzled over short forms like Rehd. for Alfred Rehder. They are all listed on page 20. *Rosa wichuraiana*, Crépin is named by François Crépin (1830-1903) though its name is now supposed to be changed to *Rosa wichurana*.

This is a sumptuous book and well worth the price.

Thoughts From a Garden Seat, Graham Stuart Thomas, published by John Murray, London, U.K. 2000, 158 pages. \$30.00. This delightful little book is not new, but it is the last one GST wrote and like all of his books it is a pleasure to read for the beauty of the language, the originality and the depth of his gardening knowledge. It is dedicated to “those about to walk down their own garden path”. It is about garden seats and the four seasons in a garden and so much more. Highly recommended.

Lastly I have enjoyed two moderately new periodicals. **Rosa Mundi**, Journal of the Heritage Rose Foundation, (www.heritagerosefoundation.com) published three times a year, \$25.00 per year.) This publication was completely redesigned two years ago and it is full of information and colour photos on old garden rose events and new research from around the world. A real delight.

The other, also new three years ago, is **Rosa Gallica**, a French Journal about Roses, published in Commer, France, in English twice a year, 10 euros, 50 – 80 pages. (www.rosagallica.org). It has no photos but has excellent articles about heritage roses and new research being done on them.

Enjoy!

GET 'EM WHILE THEY'RE YOUNG

EDITOR'S COMMENTS.

One of the prime requirements of any organization is to try to recruit young people into their activities so that those individuals can carry on when those of us who are older are no longer able to participate. And so what I would like to do, starting in this issue and continuing in future issues, is to tell the readers of the CRS Annual about young people who are currently active in their local societies. And so if you know of anyone of the younger generation who is currently active provide me with a biography and a picture, if available, and it will be included in future issues. By so doing it is hoped that others will be inspired by these stories and will encourage young people of their acquaintance to get involved as well.

CONTRIBUTED BY SANDRA SAKURA, TORONTO.

Jocelyn Sattira Guyett is my granddaughter. She was born on July 27, 2001 and so she is now 6 years old. She loves to garden because she says it is fun and she likes it when the plants grow big and tall. She thinks roses are easy to grow. She starts checking her plants at the beginning of the summer hoping she will have some to enter the rose show at the Canadian National Exhibition. Her favourite flower is the rose because they smell good and are very pretty. She likes pink roses the best. It is fun to have roses because they are very special, i.e. they just make her feel good.

Every summer she looks forward to going and seeing the other rose growers at the Canadian National Exhibition. She especially looks forward to seeing Cec and Marion Lamrock. She likes to watch them getting roses ready for the show. (ED NOTE: this indicates the importance of recognizing the young people and making them feel part of the organization. As will be seen later in this article the Lamrocks have made a significant contribution in making Jocelyn feel part of the rose scene.). Jocelyn is not allowed as yet to use sharp scissors, but she places the roses herself and knows that the best one is a rose that looks fresh and bright and holds it's head up.

Every spring she likes to go and see Mr. and Mrs. "Shamrock", as she calls them (the Lamrocks). When she won her first ribbon at the Canadian National Exhibition she went and asked Mrs. Lamrock to "come and see my ribbon". They are special people to her.

She also knows many other plants, perennials and annuals, but especially the spring bulbs. I am very envious of her roses, especially Riverdance, a pink and white striped mini which she got from the Lamrocks. I can't grow it since it dies after a year or two. Her Riverdance is about two feet tall, disease-free and full of blooms.

She attended the children's classes at the Toronto Botanical Garden when she was 3 and 4 years old.
A picture of Jocelyn with her garden in the background.

CONTRIBUTED BY ALICE HOMER, PEI ROSE SOCIETY.

Rachell Waddell is 9 years old. Her grandmother is Eleanor Kitson who has been a member of the PEI Rose Society for close to 40 years. Her specialty is miniature roses. She used to have 65 roses but when she moved to her daughter's home she took 35 with her.

Her daughter is Patricia Waddell, and she has been the show convener for PEI Rose Society for the last 4 years. Patricia's daughter, Rachell Waddell, is the subject of this article. The latter has been entering the Juniors' Division for the past 3 years.

This year she also entered the Decorative Novice Section and won the Highest Aggregate in the Novice Section as well as the Best Decorative Arrangement in the Novice Section. Rachel was quite thrilled when she was called to the front during the Awards Evening as she didn't realize that she has won a trophy and an award.

At this time the trophy sits in a place of honour in the living room and no one is allowed to move it one inch.

Rachel is 9 years old and in grade 5. She is also involved in competitive synchronized swimming and piano. Hopefully she will develop a deep love for roses and gardening, and that it will result in her becoming an active young woman in the society, as well as introducing other young people to the love of gardening and roses.

A picture of the three generations, Eleanor, Patricia and Rachel.



*Jocelyn Sattira Guyett
GTR&GS*



*3 Generations of Rosarians, Eleanor Kitson, daughter Paulette Waddell,
and granddaughter Rachel PEI RS
(reprinted from Roses-Canada with permission)*

MINATURE DESIGN

By Wendy Downing

Whoever coined the phrase, "good things come in small packages" must surely have been talking about miniature floral designs. These little arrangements capture the imagination, and, in view of changing lifestyles and downsizing into smaller living accommodations, allow us to enjoy myriad design styles from period to modern in a limited space.

What constitutes a miniature design? According to the Ontario Judging and Exhibiting Standards for Horticulture and Floral Design, a miniature design is defined as "a design with maximum dimensions of five inches (12.7 centimetres) in any direction: height, width, depth, and diagonal. For good proportion, the container should not exceed one and a half inches (3.8 centimetres) in height. Appeal is greatly enhanced when exhibited in appropriately sized niches." Those 5-3/4" wide x 6" high x 5" deep (14.6 x 15.2 x 12.7 centimetres) are ideal, and should be positioned to be viewed at eye level.

While all of the elements and principles of design should be considered, the most important design principle for miniature designs is scale. That is, the relationship in size of each part of the design to another, i.e. the flowers to each other, the flower to the container, any base or accessory to both the container and the design itself, and the size of the whole to the niche in which it is displayed. No flower should be more than one-third the size of the container.

Have you ever wondered just how they manage to put together these tiny design masterpieces? Here are a few tips on just how we can make these little lovelies ourselves.

Look for containers that are not too large but will hold enough water to keep your design fresh. Try the top of a lipstick tube. Don't use something that is too intricate.

Before you make your design, first make a niche of cardboard as a guide to ensure the arrangement remains within the size limits.

The most important thing to consider is scale and the need to keep all parts of the design in proportion. At a maximum, use only three-quarters of the five-inch space allowance to ensure lots of room around the design.

Miniature arrangements can mimic any other type of design, but are much smaller. They can be abstract, hanging, line, massed, parallel or water viewing designs. In fact once completed, if a photograph was taken, it would be difficult to tell if the design

was full-sized or miniature.

To make a successful mini, select plant material with care and consideration. There's lots to choose from, including small-leaved boxwood, cedar, heather, pine needles (for line), bittersweet berries, ivies, spirea, berberis, individual hydrangea florets, lady's mantle, artemisia, baby's breath, coral bells, grasses, statice, tansy, miniature roses, sea lavender, ferns, herbs such as parsley and thyme, goldenrod, Queen Anne's lace, mosses – anything in your garden or in the wild that's in scale with your container and the overall design. A great many of these items can be dried, giving you something to enjoy for a long time.

When making a design using fresh materials, be sure to condition it by cutting the greens and flowers early in the day and placing them in a small container of warm water. Place them in a cool, dark place for several hours. For care of specific materials, advice can be found in any good floral design book, or in *Snippy Tips*, a publication of The Garden Club of Toronto, available at the Toronto Botanic Garden's shop.

Before you begin, have the following items on-hand: floral foam (either for fresh flowers or dried, depending what plant material you are using); manicure or embroidery scissors, tweezers; an eyedropper or syringe for watering; stickum or doll house wax; wire and toothpicks. These items are known to floral arrangers as "mechanics"—they are the tools and other things used in the construction of the design and to keep it design secure.

Choose a container appropriate to the type of design you wish to create. For inspiration, look at pictures of floral designs and try to find something that is similar in shape to the container used in the picture, but in a size in keeping with a miniature design. Lids off toothpaste tubes or pump aerosol containers can be painted a colour to either harmonize with your design or contrast with it. White is a difficult colour to work with because it advances visually and appears larger. Grey or black are easier to work with until you get a feel for this type of design work. Place a button under the cap, and affix it with stickum for stability—let your imagination go! If you still have macramé beads from your hippie days, use them to hold a dried design.

Once your masterpiece is completed, where should it go? It's best to display it at eye level where it's sure to be seen. Frame the design in a small shadow box of the appropriate dimensions that you can buy or construct, or place it on a shelf where you can enjoy viewing it to its best advantage. Next step? Enter a flower show. Who knows, you might just come home with a red ribbon!

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Miniature Design



Miniature Design



*Miniature Design
as it says*

REPORTS FROM INDIVIDUAL ROSE SOCIETIES

EDITOR'S NOTE.

I do not believe that it is the function of a national publication such as the CRS Rose Annual to report all of the detail news of the individual rose societies. But on the other hand the rose societies are doing valuable work both for their members and for the community at large, and these societies not only deserve recognition from other rose societies in Canada, but also their ideas might serve as an inspiration to other societies to get involved in a similar fashion.

And so I asked the rose societies if they would tell me about their top rose show winners, plus a short biography of them if possible, since they might be among the future leaders of our organization, about any gardens in the community for which they are responsible, and for any unusual activities which they are undertaking this year.

A few of the societies found the time to answer, for which I thank them most heartily, and their reports are summarized below. These reports give examples of the type of information I was attempting to elicit. If other societies feel it is a worthwhile type of information to share I invite your participation in future years.

This article has been put together by the editor from material provided by the various societies.

VANCOUVER ROSE SOCIETY.

The best rose is show was won by Christina Cheng and she won it with Liebeszauber. The following is a short biographical sketch prepared by Christina.

On an ordinary Sunday, I went shopping at Eaton Centre in Vancouver, there were lots of beautiful roses exhibited on the tables in the mall. I then realized it was the Vancouver Rose Society's annual rose show, and was also the VRS's 40th Anniversary. The roses were breath taking. I then decided to join the society and wanted to participate in exhibiting and competitions.

I have been a member of the society since 1989, and have participated in the show since 1993. I have won a few trophies and ribbons; and this is the best hobby I have ever experienced in my entire life. Hopefully, I will

continue to do so.

The second best rose in show was won by John Bennett and he won it with Neptune. The following is a short biographical sketch of John.

As a resident of West Vancouver, I began my interest in growing roses in 1995, the year we bought our new house. I started with around eight roses and the addiction took off from there.

I had purchased over 200 Hybrid Teas in a matter of a few short years. The problem was I could not get into the beds to feed them because they were so close together so I had to give some away. That was very upsetting!

Then someone introduced me to the world of exhibiting and I was immediately hooked. I went out and bought the book "Showing Good Rose". That book was, and still is, my biggest influence in exhibiting roses. My goal each year is to make it to the trophy table.

Many people ask me what my favourite rose is and I could not have given them an answer until two years ago. That was when I fell in love with the gorgeous purple Hybrid Tea Neptune!!! I now own four of them. A very close second is the beautiful Helen Naude and right behind her is the lovely Sheer Elegance.

I have ordered eight more roses for the fall and that will be it for ordering roses. I am extremely excited about our Vancouver Rose Society hosting The World Federation of Roses in 2009. I hope that everyone will come to our beautiful city that week and be a part of all the exciting festivities. It is something you all will not want to miss.

Other big winners for which biographical information is not available were as follows.

Best OGR (Dowager Queen) pre 1867, won by Lesley Finlay with Chapeau de Napoleon.

Best Grandiflora, Sandra Simic with Wild Blue Yonder.

Best Floribunda Spray, Sandra Simic with Cotillion.

Best Shrub, not Austin, Hilda Duff with Armada.

Best Austin, Lesley Finlay with The Mayflower.

Best Mini Flora, George Mander with Ingrid.

Best Miniature exhibition Bloom, George Mander with Glowing Amber.

Best Miniature Spray, Lesley Finlay with Amber Star.

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Moonstone, Queen of Show H&B RS



Part of the Rose Show at Royal Botanical Garden H&B RS

2007 Canadian Rose Annual



Best Mini Spray – Green Ice GTR&GS



*Best Floibunda – Europeana
GTR&GS*

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Elaine Sparrow presenting Jason Bank winner of numerous trophies including Queen of the show H&B RS



Elaine Sparrow presenting Joyce Turner with her gift for Minature Queen of the show H&B RS

2007 Canadian Rose Annual



Best Old Garden Bouquet H&B RS



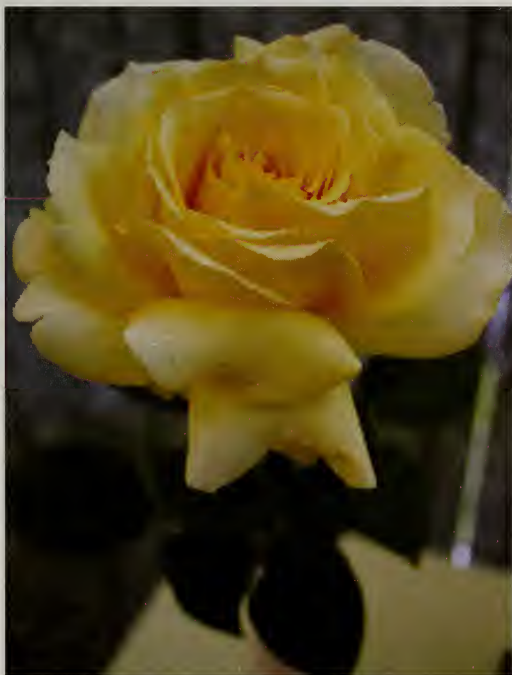
*Elaine Sparrow presenting Grace Horlings the trophy for Elina,
Princess of Show H&B RS*

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City of Welland
Prince of Show H&B RS

Elina,
Princess of Show H&B RS



Best Novice, William McCarthy with Irresistible.
Best Exhibit of Floral Art in the show, Jennifer Lay.

As regards special activities, as we all know the Vancouver Rose Society is busily engaged in preparing for the World Federation of Rose Societies Meeting which will be held in Vancouver in June of 2009.

HAMILTON AND BURLINGTON ROSE SOCIETY.

Their 2007 show was the Golden Celebration Show for the society, and for the achievement of this goal the society deserves congratulations.

The most important individual awards were as follows.

Best in show – Elizabeth Schleicher with Pirate's Loot

Queen of Show - Jason Bank with Moonstone.

Miniature Queen of Show - Joyce Turner with Winsome.

Best Design in Show - Dawn Suter with New Frontiers.

Judges' Choice Design - Elizabeth Schleicher with Precious Moments

An innovation for this Society will take place in 2008 and it will be what I believe to be the first-ever All Canadian Rose Show. I am sure they would like to invite everyone within driving distance to this first for this type of event.

A number of pictures from their 2007 show are included.

HURONIA ROSE SOCIETY.

For several years the Huronia Rose Society had sought a location to establish a rose garden of hardy Canadian roses. In 2000 as a Millennium project, the Millennium Memorial Rose Bed was created as a gift to the city and an educational project to promote growing Canadian bred roses. The city donated and prepared the garden and members donated the 28 roses in memory of loved ones. The members of the society maintain the garden, and they have found that not only has it become quite well known in Barrie, but also it has increased the exposure for growing roses in that community.

GREATER TORONTO ROSE AND GARDEN SOCIETY.

The winners in the Annual Show were as follows.

Queen of show in both HTs and miniatures - Dave Money.

The best HT was Olympiad and the best miniature was Year 2000.

Best miniature spray - Gloria Brooks, and it was won with Green

Ice.

Best shrub and best novice - Sarah Wilson. The best shrub was Graham Thomas and the best novice award was won with the mini Top Marks.

Best Floribunda - Ken McFarquhar, and it was won with European.

PRINCE EDWARD ISLAND ROSE SOCIETY.

Their 2007 show was in celebration of the society's 40th anniversary, for which we congratulate the society. And they experienced a sensation familiar to many show organizers when cold and wet weather made them doubt that there would be any roses to exhibit. But they forged ahead and had a good show, albeit a smaller one than normal. As a special recognition of the event Jill Harris, a harpsichordist, composed an original piece for the evening's event. Years ago Jill's grandfather had been an exhibitor and winner

Their special activities have been as follows:

The last two years our group has tried to make the public aware of our organization and we have tried to do some special publicity. At last years show the photographer for the "Guardian" took pictures of the roses belonging to different members. The result was a whole page on the very front front page of the local newspaper, instead of the first page of the Community Section. There was a tremendous amount of positive comments from people in the community about the roses being on the front page, it also made people aware of the group who didn't know we existed.

Recently our new Educational Coordinator, Rozanna Gorveatt-Flynn was asked to prepare a program for the Charlottetown Library. She will be busy deciding what type of presentation to do. We hope this will introduce the society to others and encourage them to join.

Two years running we have set a booth up at the P.E.I. Garden Show held in April at Crapaud. Last year we thought we had done quite well in making people aware of the Society, but this year was fantastic. We had an excellent location and Rozanna and our committee put a lot of work into decorating it for our 40th anniversary. The garden show was a great success and our own volunteers were kept on their toes handing out educational material and answering tons of questions for two days. .

The show awards were as follows.

The Queen of the Show was won by Freeman Newson. He is a previous 6-time Queen winner. Freeman has made a major contribution to rose culture with society members and the public

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*Best in Show "Pirate Loot"
won by Elizabeth Schleicher H&B RS*

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Dave Money with Queen of the Show GTR&GS



Carol Wilson with Best Novice Award GTR&GS

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*Queen of Show – Olympiad
GTR&GS*



*Mini Queen – Year 2000
GTR&GS*

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Ken McFarquhar with best Floribunda GTR&GS



*Gloria Brooks with Best Mini
Spray GTR&GS*

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*Keith Brehaut presenting one of several awards to Barbara Watson
– President Alice Homer in background PEI RS*



Photo of awards table at 2007 Annual PEI Rose Show in July

2007 Canadian Rose Annual



*Barbara Watson in her
garden PEI RS*



*Hon Barbara A Hagerman, Lieutenant Governor Prince Edward Island presenting
Freeman Newson the MacRae Trophy for Queen of the Show PEI RS*

2007 Canadian Rose Annual



*Ray Hopkins receiving
his winnings from
Elaine Sparrow H&B RS*



*Honorary members Norman Mackay (Blue Shirt), George Pagowski and
Dr. Leslie Laking (seated) with Elaine Sparrow Show Chair H&B RS*

through presentations, mentoring and advice. He has an excellent background for his hobby as he attended McGill University's MacDonald Agricultural College where he specialized in plants and soils. In addition to winning the Queen, Newson was also awarded the Dr. R. G. Lea Trophy, which is awarded for Excellence in Rose Culture. This trophy is presented in honour of Dr. Gordon Lea in recognition of his assistance to all rose growers and Islanders who love roses.

Other major winners were as follows.

Best Floribunda in Show - Barbara Watson.

Best Grandiflora in Show - Myrtle Brown.

Best Rose by a Novice - Fred Brown.

Best Miniature Rose - Don Warren.

Best Decorative Arrangement—Helen Warren

Recent Literature on Rose Research

Dr. David H. S. Richardson, Dean Emeritus,
Saint Mary's University,
923 Robie Street, Halifax, NS, B3H 3C3, Canada.

This compendium summarizes papers published in research journals throughout the world. If you wish to consult the full paper and cannot find a copy at your local university, write to Professor Richardson enclosing a cheque \$1 per page to cover the cost of photocopying and postage.

Baas, R. & van Rijssel, E. (2006) Transpiration of glasshouse rose crops: evaluation of regression models. Proceedings of the 3rd International Symposium on Models for Plant Growth, Environmental Control and Farm Management . *International Society of Horticultural Science* **718**:547-554.

Supplementary lighting is increasingly used in the Netherlands for greenhouse rose crops and this reduces the need for heating. However below-canopy heating is still used to 'activate' the crop. This study developed a model to assess water uptake loss by the roses as well as energy needs derived from the sun, lighting and below-canopy heating.

Babaei, A., Tabaei-Aghdaei, S.R., Khosh-Khui, M., Omidbaigi, R.m, Naghavi, M.R., Esselink, G.D. & Smulders, M.J.M. (2007) Microsatellite analysis of Damask roses (*Rosa damascene* Mill.) accessions from various regions in Iran reveals multiple genotypes. *BioMedical Central Plant Biology* **7**:12-18.

Damask roses are used in Bulgaria, Turkey and Iran to produce essential oils used in perfumery and which have anti-microbial activity. Forty samples from 28 provinces in Iran were studied using molecular biology and nine genotypes were identified. The commonest was identical to the damask rose cultivars grown in Bulgaria. The genotypes unique to Iran were from remote mountainous areas where roses are cultivated on a small scale. These may be valuable in future breeding programmes.

Bruneau, A., Starr, J.R. & Joly, S. (2007) Phylogenetic relationships in the genus *Rosa*: new evidence from chloroplast DNA sequences and an appraisal of current knowledge. *Systematic Botany*

Traditionally, the genus *Rosa* has been divided into three small subgenera *Hulthemia*, *Platyrhodon* and *Hesperhodos*, and one large subgenus *Rosa* that is divided into ten sections. This new analysis using molecular biology suggests that the subgenus *Rosa* should only be divided into two, the first with sections *Carolinae*, *Cinnamomeae* and *Pimpinellifoliae* and a second with all the remaining. Analysis of the wild roses of North America indicated that migration from the old world (Europe and Asia) occurred on two occasions.

Burrell, A.M., Lineberger, R.D. & Byrne, D.H. (2006) Genetic variation in somatic embryogenesis of rose. *HortScience* **41**:1165-1168.

In order to introduce genes for disease resistance or new colour pigments into roses, one needs to grow callus *in vitro*. Then after genetic manipulation, get it to regenerate into a whole plantlet. This study of 15 rose genotypes revealed that the ability of callus to undergo embryogenesis, organize and regenerate was under genetic control. Plantlets could be more easily regenerated from callus of some cultivars and their progeny, than from others.

Cherri-Martin, M., Jullien, F., Heizmann, P. & Baudino, S. (2007) Fragrance heritability in hybrid tea roses. *Scientia Horticulturae* **113**:177-181.

The inheritance of scent in roses has never been properly evaluated. The segregation of scent constituents in 107 progeny resulting from a cross between cv's Anna and Bo was studied. The scent from the former was rich in dimethoxytoluene (tea scent) and the latter in monoterpene alcohols (old rose scent). Of 30 volatile compounds in these roses, 11 were used for studying the progeny. It was found that the quantity and quality of volatile compounds was generally lower in the progeny and those with a pleasant fragrance rare. However three plants from the cross had a combination of the fresh and sweet odours that was really nice.

Dewitte, A., Leus, L., Van Huylenbroeck, & J., Hofte, M. (2007) Characterization of reactions to powdery mildew (*Podosphaera pannosa*) in resistant and susceptible rose genotypes. *Journal of Phytopathology* **155**:264-272.

This study examined rose leaf cells to penetrated by the powdery mildew fungus. A range of reactions was observed with no clear defense response being show by the susceptible cultivar 'Gomery'. In the Wichuraiana hybrid 'Excelsa' only about 30% of the fungal penetrations were normal and only a few fungal spores were formed. Finally in *Rosa wichuraiana* itself and *R. laevigata* there was a wide range of defense strategies. These included the hypersensitive response which results in host cell collapse, preventing nutrients from being transported to the fungus, and the production of active oxygen species such as hydrogen peroxide.

Dieleman, J.A. & Meinen, E. (2007) Interacting effects of temperature integration and light intensity on growth and development of single-stemmed cut rose plants. *Scientia horticultrae* **113**:182-187.

Greenhouse temperature and ventilation is often controlled to set levels, but allowing these to fluctuate within limits for a period can save energy. However, if large temperature fluctuations, 10oC, were permitted, the length of flowering shoots was significantly reduced. Selecting the appropriate light regime, a lower average daily temperature, and the right level of fluctuation provides the best opportunity for reducing energy consumption.

Frere, I., Fabry, J. & Hance, T. (2007) Apparent competition or apparent mutualism? An analysis of the influence of rose bush strip management on aphid population in wheat field. *Journal of Applied Entomology* **131**:275-283.

Grass strips between fields of cereals can be places where predator populations can build up that reduce the impact of aphid pests on the cereals. Shrubs may be more effective than grass. However this study comparing aphid numbers on cereal fields surrounded by *Rosa rugosa* or grass indicated that roses did not provide any benefit. This may have been because the predators stayed on the roses, or because the strip of roses was planted afresh each year so predator populations did not have time to build up.

Halmagyi, A & Pinker, I. (2006) Cryopreservation of *Rosa* shoot tips: importance of preculture conditions. . Proceedings of the Vth International Symposium on in vitro culture and Horticulture Breeding. *International Society of Horticultural Science* **725**:351-356.

Cryopreservation is the only safe efficient means to ensure that plant germplasm is preserved. *In vitro* grown rose shoot-tips of cv 'Fairy' and unspecified wild roses were treated for 20 minutes using a one-step combined vitrification droplet technique before freezing in liquid nitrogen. This new protocol resulted in survival of close to 70% of the cryopreserved shoot tips following thawing and cultivation on fresh media.

Jakobsone, G., Ricksta, D & Rihtere, A. (2006) Breeding of *Rosa rugosa* Thunb. using different tissue culture methods. Proceedings of the Vth International Symposium on in vitro culture and Horticulture Breeding. *International Society of Horticultural Science* **725**:211-215.

In Latvia, and countries with other cold climates, *Rosa rugosa* hybrids are ideal for parks and gardens. However no cultivars are available with yellow, orange or bright red flowers. Part of the problem following hybridization, the embryos often abort.. This study showed that one week old embryos could be removed from the young seeds and cultivated in vitro. It is hoped that plants can be regenerated from these rescued embryos and will yield flowers with the sort-after colours.

Kim, C.K., OH, J.Y., Chung, J.D., Burrell, A.M. & Byrne, D.H. (2004) Somatic embryogenesis and plant regeneration from *in vitro* grown leaf explants of rose. *HortScience* **39**:1378-1380.

In vitro grown plantlets can be induced to form callus, which if appropriately treated will form somatic embryos (rather like those in seeds). These will, when treated with plant hormones etc., develop into plantlets and plants. Callus of this type is useful when inserting genes, or for making protoplasts that can be fused with those from normally incompatible roses. This paper provides a detailed protocol for the production of embryogenic callus, the induction of embryogenesis and the development of the embryos into plantlets and plants.

Leggo, J.J. & Shorthouse, J.D. ((2006) Development of stem galls induced by *Diptolepis triforme* (Hymenoptera: Cynipidae) on *Rosa acicularis* (Rosaceae). *Canadian Entomologist*, **138**:661-680.

Diptolepis triforme induces multi-chambered galls on *Rosa acicularis* in northern Canada. These tiny wasps spend all but one week of their lives within the galls. The eggs that the adult lay, induce the

rose tissue to proliferate. As the larvae begin to feed, they do so on formed by the rose and supplied with nutrients by new vascular tissue. Then a layer of hard protective rose cells form around each larval chamber and the larvae pupate. The following spring adults emerge by chewing an exit hole and then fly off to mate and lay eggs.

Leggo, J.J. & Shorthouse, J.D. ((2006) Modifications of galls of *Diplolepis triforme* (Hymenoptera: Cynipidae) by parasitoids *Eurytoma spongiosa* (Hymenoptera: Eurytomidae) and *Glyphomerus stigma* (Hymenoptera : Torymidae). *Canadian Entomologist*, **138**:681-696

The larvae of cynipid wasps that induce rose galls are themselves parasitized by other insects termed parasitoids. These consume, and result in up to 80% death of the inducer wasps. The parasitoids often begin to feed on their wasp hosts quite early on, but do not kill them for a long time. One parasitoid *Glyphomerus stigma* eats and kills the cynipid larvae and is unusual in that it too can induce the rose to produce new nutritive cells upon which it feeds.

Kaminski, M., Sliwa, H & Malinowski, T. (2006) Occurrence of rose degeneration symptoms in rose plants in Poland: presumed phytoplasma aetiology of rose proliferation and dieback. Proceedings of XIth International Symposium on Virus Diseases of Ornamental Plants. *International Society of Horticultural Science* **722**:163-174.

Conspicuous growth-stunting, bud-proliferation and die-back due to aster yellows phytoplasma was observed in 33 cultivars in about half the commercial rose growing greenhouses in Poland. In some cultivars the disease is latent and symptoms only appear under particular growing conditions. Therefore the best control method is to use disease-free mother stocks that have been checked using available molecular biology techniques.

Kepczynsky, J., Nemoykina, A. & Kepcyunska, E. (2006) Ethylene and *in vitro* rooting of rose shoots. *Plant Growth Regulation*, **50**:23-28.

Roses are micropropagated in glass jars or Petri plates that are more or less air-tight. so that the plant hormone ethylene builds up inside. Ethylene is gaseous and affects many aspects of plant growth and development. This can be studied using ethylene precursors to en-

hance ethylene production or inhibitors to reduce its release. This study showed that ethylene levels have to be low for optimum root formation and emergence. Therefore, ethylene inhibitors should be used when rooting rose shootlets. Once the roots have emerged, ethylene can be allowed to build up as it enhances subsequent root growth

Marissen, N., Snel, J., Elings, A. & Warmenhoven, M. (2006) Mobile light in roses. Proceedings of the Vth International Symposium on Artificial Lighting. *Acta Horticulturae* **711**:189-193.

Having lights that move back and forth across a greenhouse has frequently been hypothesized to yield more flowers while using less energy. This study tested this idea using the rose cv 'First Red'. A traditional rose crop was used, as well as one in which bud break was synchronized on cuttings yielding plants with just two shoots. Subsequent bud break and flowering shoot production was synchronized. The results revealed that static lights were better than moving lights for both cultivation regimes. The reasons for this are discussed

Mattson, N.S. Leith, J.H. & Kim, W.S. (2006) Modeling the influence of cyclical plant growth and nutrient storage on N, P, and K absorption by hydroponically grown cut flower roses. Proceedings of the 3rd International Symposium on Models for Plant Growth, Environmental Control and Farm Management. *International Society of Horticultural Science* **718**:445-452.

Hydroponic greenhouse rose crops use large amounts of fertilizer which can be expensive and pose problems for the wastewater. To reduce inputs, growers need to optimize timing and application levels. A nutrient absorption model was developed. This demonstrated that when trying to predict nutrient uptake by the rose plants, it is important to account for nutrient storage in the rose tissues and its subsequent mobilization.

Sane, A.P., Tripathi, S.K. & Nath, P. (2007) Petal abscission in rose (*Rosa bourboniana* var Gruss and Teplitz) is associated with the enhanced expression of an alpha expansin gene, RbEXPA1. *Plant Science* **172**:481-487.

Once rose flowers have been pollinated, stamens shrivel, and petals fall off gradually or rapidly. This process is triggered by the production of the plant hormone ethylene following pollination. Freshly-

cut flowers with unfurled petals, but which are unpollinated lose their petals within about 30 hours; those that are exposed to ethylene drop their petals in half this time. In contrast, flowers that are exposed to an ethylene inhibitor lasted for three days. Petal abscission seems to be associated with the enhanced expression of the ethylene responsive alpha expansin gene RbEXPA1

Savvas, D., Gizas, G., Karras, G., Lydakis-Simantiris, N., Salahas, G., Papadimitriou, M. & Tsouka, N. (2007) Interactions between silicon and NaCl salinity in soilless culture of roses in a greenhouse. *European Journal of Horticultural Science* **72**:73-79.

When roses are grown on soil-less media, the available levels of silicon are lower than when planted in soil. Silicon provides enhanced resistance to mildew and other beneficial effects. In this study on hydroponically grown roses, soluble potassium silicate was added to the nutrient solution that contained either normal or high levels of salt. The silicon improved growth and the number or marketable flowers in the low salinity treatment. However, it did not compensate for the effects of high salt levels that reduced flower production and quality in the other treatment.

Vaupel, A., Klinge, K., Brandle, M., Wissemann, V., Tscharnatke, T. & Brandl, R. (2007). *Biological Journal of the Linnean Society* **90**:619-625

Larvae of the European rose hip fly develop in the hips of roses such as *R. canina*, *R. corymbifera* and *R. rubiginosa*. The adult female lays one egg per hip under the skin of green hips in early summer. She marks the hip with a pheromone to deter other females. In the autumn, the mature larvae leave the hip and hibernate underground until the next year. This study of fly populations in Germany and Switzerland found there were some differences but no distinct fly races across the host or geographic range.

Whitaker, V.M., Hokanson, S.C. & Bradeen, J. (2007) Distribution of rose black spot (*Diplocarpon rosae*): genetic diversity in eastern North America using amplified fragment length polymorphism and implications for resistance screening. *Journal of the American Society of Horticultural Science* **132**:534-540.

Black spot is spread by the two celled asexual spores that need a water film to germinate and penetrate rose leaves. The sexual stage has only been found twice in Europe and twice in America. Mo-

lecular biology is therefore of value to sort out the genetics of the seven races present in the USA which have been identified using pathogenicity tests. It was found that the 50 isolates of black spot had significant genetic diversity but that the movement of rose plants around eastern North America has led to widespread geographic distribution of the various strains. Thus breeders may not need to field test new cultivars in more than one area as most, if not all, of the strains will be present there.

Wright, E.R., Pizzingrilli, P. & Caligaris, M.V. (2007) Rose die-back caused by *Trichothecium roseum* in Argentina. *Plant Disease* **91**:631.

Roses are an important crop in Argentina but since 2002, a new disease has appeared in the area around Escobar, Buenos Aires and La Plata. The symptoms are stem die-back progressing to plant death and it is associated with pruning and flower harvesting. The cause of the disease has now been identified as the mold *Trichothecium roseum*.

Yamada, K., Ito, M., Oyama, T., Nakada, M., Maesaka, M. & Yamaki, S. (2007) Analysis of sucrose metabolism during petal growth of cut roses. *Postharvest biology and technology* **43**:174-177.

Sugar metabolism was studied in cv Febesca (Pretty Woman) using attached and detached flowers and petals. Detached flowers were supplied with either water or sucrose solutions. The enzymes which metabolize sucrose increase in flowers that remain attached to the plant during petal growth but decrease in the cut ones. Furthermore, detached petals did not grow as large as the ones left on the plant even if given sucrose. The enzymes associated with sugar metabolism may be important factors controlling post harvest flower quality in some rose cultivars.

Yohalem, D.S., Paaske, K., Kristensen, K. & Larsen, J. (2007) Single application prophylaxis against gray mold in post rose and pelargonium with *Ucladium atrum*. *Biological Control* **41**:94-98.

Gray mold, *Botrytis cinerea*, is a constant threat for those producing pot roses on a commercial scale. Pre-emptive treatment of the plants using spores of the antagonist fungus *Ulocladium atrum* was as effective as fungicidal treatment. This strategy was superior to no treatment or treatment following gray mould infection. Pre-emptive

application of *Urocladium*, which is an aggressive saprophytic colonizer, also helps to prevent gray mold invasion of detritus and wound sites following pruning of the pot roses.

Zhang, L.H., Byrne, D.H., Ballard, R.E. & Rajapakse, S. (2006) Microsatellite marker development in rose and its application in tetraploid mapping. *Journal of the American Society of Horticultural Science* **131**:380-387.

Roses are the most important ornamental crop on a world-wide basis with 200 species and 18,000 cultivars. Most of the latter are complex triploids and tetraploids derived from about 10 wild diploids and a few tetraploids. The microsatellite markers developed in this study will lead to consolidation of the available diploid and tetraploid genetic linkage maps and aid in cultivar identification. In the longer term, these studies will help rose breeders by identifying which genes control important traits in roses.

CLEARING HOUSE

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What follows are the reports from the 2006 gardening season which were submitted for publication in this, the Canadian Rose Society's 2007 Annual. I have received from 9 contributors, a total of 77 reports. Thank you. It is contributors such as yourselves that have sustained The Clearing House over its many years of providing information to rosarians about the performance of new rose varieties.

I would like to thank my proofreaders, Anne Graber and Judith Roback. Both correct my many errors and Anne also checks the information for each cultivar. Any remaining errors or omissions are my responsibility.

This year some 32 varieties, introduced in 1999, have reach the end of their Clearing House life. Of note are: two introductions from Tom Carruth, the Floribunda 'Betty Boop' and the climber 'Fourth of July'; the Canadian Explorer Rose 'William Booth' (Agriculture Canada); and the Canadian miniature roses 'Brittany's Glowing Star' (Mander & Pazdzierski), and Keith Laver's 'Springwood Classic', and 'Stripped Festival'.

The Clearing House has been a part of the CRS's Annual since the beginning in 1955, but first appeared in the 1939 Rose Society of Ontario Yearbook, the precursor to the Canadian Rose Society, and so represents almost seventy years of unbroken comments, kind and otherwise, from rose gardeners passing judgement on the new varieties introduced by rose breeders. However, participation in The Clearing House has been declining over the years for a multitude of reasons – a worldwide decline in rose societies' memberships; many members' gardens have matured and they rarely buy new varieties; a decline in planting roses because of pesticide bans; a trend to smaller gardens and low maintenance gardens; a lack of availability across the country of the newer varieties; and a shift away from Hybrid Teas, and Floribundas to Shrub roses which take up more space and result in fewer new varieties purchased. I would like to reverse this decline because, whether in 1939, or in 2007, The Clearing House has been an informative forum for members, made so by the roses and the comments of the contributors, and it would be a shame to see it disappear.

I urge members and readers to submit their comments on the newer

roses varieties that you have grown in the 2007 season – even one report is an important addition. All roses *introduced in or after 2000* are eligible, but if you are uncertain about the date, send it along and I will make a determination. Report forms have been included with the 2007 Annual or can be obtained from the addresses above. Readers are particularly interested in how a variety grows in your garden. Does it repeat quickly? What colour is it in your garden? Is it a good garden or an exhibition variety? Is it disease-resistant (an increasing consideration)? Will you get rid of it, keep it, get more?

Report forms can be sent to the Editor at the addresses above. Although not a firm deadline, I would appreciate receiving your 2007 reports before Feb. 1, 2008.

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Please Note: The full name and address, and zone, of each contributor is listed under **CONTRIBUTORS**. Surnames only are used in individual reports.

PROVINCE/COUNTRY**CONTRIBUTORS**

	2006/2007	2005/2006
Alberta	0	0
British Columbia	1	3
Manitoba	0	0
New Brunswick	0	0
Newfoundland	0	0
Nova Scotia	1	1
Ontario	5	6
Prince Edward Island	0	0
Quebec	0	0
Saskatchewan	0	1
Japan	0	1
USA	2	2
Total Contributors	9	14
Total Reports	77	117

HARDINESS ZONES

The Hardiness Zone which occurs after each contributor's name and address is an attempt to utilize the 2000 Plant Hardiness Zones Map produced by Natural Resources Canada's Canadian Forest Service scientists. The 2000 map updates the 1967 Plant Hardiness Zones Map and utilizes nine major zones – the harshest is Zone 0, and the mildest is Zone 8. Subzones (e.g. 5a, 5b) are used as in the past (Interactive versions of both maps can be found at: http://www.agr.gc.ca/nlwis-snite/index_e.cfm?s1=maps_cartes&page=intro). This year I have included the 1967 Zones numbers and they appear in brackets after the 2000 Zones; if the Zone numbers are the same only one is included.

Readers of The Clearing House should be aware that the concept of “hardy/hardiness”, especially when referring to roses, is not rigorously defined. If a contributor suggests a rose is ‘hardy’ it means only that it has survived in his or her garden with whatever form of winter protection was used. Using the Canadian Hardiness Zones allows the reader to compare the winter conditions in contributors’ gardens to the reader’s own garden.

ABBREVIATIONS USED IN TEXT

centimetre(s) - cm
date of introduction - int
feet - '
Floribunda - F
Grandiflora - Gr
Ground cover - (Gc)
Hybrid Tea - HT
inches - "
Kordesii Shrub - K
Large Flowered Climber - LCI
metre(s) - m
Miniature - Min
Mini-Flora - MinFl
no date - nd
plant(s) - pl(s)
Shrub rose - S
year(s) - yr(s)

ABBREVIATIONS USED FOR AWARDS

AARS	All-America Rose Selection
ADR	Anerkannte Deutsche Rose
ARC	American Rose Centre
AoE	Award of Excellence (Miniatures)
FA	Fragrance Award
GM	Gold Medal
PIT	President's International Trophy (England)
RNRS	Royal National Rose Society
ROTY	Rose of the Year

NOTE: Awards won by a particular rose are shown in the brief general description following the name of the variety.

COLOUR CLASSIFICATIONS

Because the Canadian Rose Society and American Rose Society colour classifications are now almost identical, abbreviations below are used throughout. Any variations are given in the text.

White or near White	W
Light Yellow	LY
Medium Yellow	MY
Deep Yellow	DY

Yellow Blend	YB
Apricot & Apricot Blend	AB
Light Pink	LP
Medium Pink	MP
Deep Pink	DP
Pink Blend	PB
Orange & Orange Blend	OB
Orange Pink	OP
Orange Red	OR
Medium Red	MR
Dark Red	DR
Red Blend	RB
Mauve or Mauve Blend	M
Russet	R

STANDARD DESCRIPTION

The standard description of each variety was constructed using information from Modern Roses 11 and from 'Rose Registrations' in *American Rose* both published by the American Rose Society in its capacity as International Registration Authority for Roses, and from the Combined Rose List 2007 (Edited by B. R. Dobson and Peter Schneider), and is given following the name of each variety: hybridizer; date of ARS registration; date of introduction; parentage (if available); official Colour Classification; a brief colour description as shown in 'Rose Registrations', Modern Roses 11, Combined Rose List 2007, Botanica's Roses, a rose catalogue, or other source; petal count; fragrance; awards. The Editor has relied almost exclusively on the Combined Rose List 2007 to determine the 'date of introduction'.

NOTE: The comment 'No reports' indicates the variety was reported on in previous years but no reports were received in the current year. For The Clearing House, a rose is reported for 7 years, plus the current year, from the date of introduction, then I state 'Last year for reporting this rose'.

HYBRID TEAS

ADRIANA, HT (Fryer '00). AB, creamy caramel. No reports.

BARBRA STREISAND, HT (Carruth '99) [(Blue Nile X (Ivory Tower X Angel Face)) X New Zealand]. M, lavender, 26-40 petals, intense fragrance. No reports. (Last year for reporting this rose.)

BLUSHING BEAUTY, HT (Dykstra '00 int '03). W. No reports.

BROOKS' RED, HT (Brooks '00). MR. No reports.

CAJUN MOON, HT (Carruth '02 int '01) [Crystalline X Lynn Anderson]. W (PB), flowers white edged pink on upper petal surface, 26-40 petals, slight fragrance. Clausen (3 pls 3 yrs 3.5' IL): Beautiful white blooms edged with dark pink; exhibition form with good substance. The early spring blooms were ideal and it also does well in the fall. Good growth habit with medium-green foliage. I continue to spray to prevent diseases. Hardiness is okay. A choice exhibition rose. I have propagated two more on their own roots. If you follow rose growing rules, this is the rose.

CAJUN SUNRISE, HT (Edwards '00 int '01). PB. No reports.

CHESHIRE, HT (Fryer '99 int '01). MY, (AB), golden honey yellow, 17-25 petals, moderate fragrance. No reports.

CHRISTINE'S DREAM, HT (Bridges '02) [King of Hearts X Thriller]. RB, medium red upper, pink/white reverse, 26-40 petals, moderate fragrance. No reports.

DREAM ORANGE, HT (Twomey '99 int '00) [Cherish X (Evening Star X Trumpeter)]. OR (OB), 26-40 petals, intense fragrance. No reports.

DREAM RED, HT (Twomey '99 int '00) [Esmeralda X Fireburst]. MR, slight fragrance. No reports.

DREAM YELLOW, HT (Twomey '99 int '00) [(Sonia X Prominent) X Whisky Mac]. MY, 17-25 petals, intense fragrance. No reports.

FIREFIGHTER (HACIENDA, RED 'N' FRAGRANT), HT (Orard '04 int '00). DR, flowers dark red, velvety dark red upper, medium red reverse, large (4.5 in.), very full (40-45 petals), intense fragrance, Rome GM & FA 1998, Bagatelle, Geneva, Madrid, Monza & Saverne FA 1998. Clausen (1 pl 1 yr 4' IL): Red, excellent form, 40 petals, very good substance. Good growth habit. Dark green foliage. A little black spot. Disease-resistant, but spray anyway. Developed well for a 1st year rose. Fragrant. In my hybridizing program I have been tempted to cross 'Firefighter' with 'Veterans' Honor'.

FULL SAIL (LAND OF THE LONG WHITE CLOUD) (LONG WHITE CLOUD), HT (McGredy '98 int '99, 'New Zealand' Sport). W, 26-40 petals, intense fragrance. No reports. (Last year for reporting this rose.)

GEMINI, HT (Zary '99 int '00) [Anne Morrow Lindbergh X New Year]. PB, cream blushing coral pink, 25-30 petals, sweet fragrance, AARS 2000. Clausen (3 pl 6 yrs 5.5' IL): Pink blend, average of 25-30 petals, exhibition form with good substance. Could bloom more. Good growth habit with medium-green foliage. Keep sprayer handy. Hardiness is good. In my opinion, 'Gemini' and

'Veteran's Honor' are the two best HT's from Jackson and Perkins. Decker (1 pl 5 yrs AK): A consistent bloomer. Very nice colour and long-lasting in our cooler climate. Stanton (1 pl 2 yrs 3' ON): A near-white centre with orange-pink edges. Exhibition form with good substance. An upright growth habit with dark green foliage. Black spots. Good hardiness with cover.

GOLDEN FAIRY TALE (STERNTALER), HT (Kordes '06 int '05) YB. No reports.

GOLDEN OLDIE (GOLDEN OLDIES), HT (Fryer '01). DY. golden apricot, some fragrance. No reports.

GOOD LIFE (GOOD LIVE), HT (Cocker '01). OB. No reports.

HALLÉ, HT (Fryer '02). OB. Glasgow GM 2003. No reports.

HOT PRINCESS, HT (Tantau '00). DP. Clausen (3 pls 3-5 yrs 5' IL): Fuchsia-pink. Great exhibition form, with good substance. Usually one bloom per stem. No confused centres. Very good growth habit with attractive, dark green foliage. Seems to be black spot tolerant. Very hardy. I happen to like dark pink roses with excellent form. Most Tantau bred roses have done well in our garden. Even with extra fertilizer, the blooms keep their form.

LET FREEDOM RING, HT (Earman '04 int '05) [Prima Donna X Touch of Class]. MR. flowers red, strawberry red upper, same reverse, large (10-13 cms.), dbl (17-25 petals), no fragrance. Clausen (3 pls 1 yr 3.5' IL): A nice red, exhibition rose. Large blooms, 20-30 petals, slight fragrance. Classic form with good substance. Very good growth habit. Shiny green foliage. I would spray it. Why wouldn't this rose be good – a cross between 'Prima Donna' and 'Touch of Class'? Responds very well to fertilizer. If available in your area, give this variety a try.

LOVE AND PEACE (PULLMAN ORIENT EXPRESS), HT (Lim/Twomey, '01 int '02) [Seedling X Peace]. YB. yellow blend with pink edge, 40 petals, sweet fruity fragrance, AARS 2002. No reports.

MARILYN MONROE, HT (Carruth '02) [Sunset Celebration X Saint Patrick]. AB. soft apricot washed green on upper surface, same reverse, no fragrance. No reports..

MAVRIK (MAVERICK), HT (Eddie Edwards '00 int '99). PB. Clausen (3 pls 4 yrs, 3.5' IL): Pink blend. Not a vigorous bloomer, but blooms are quality blooms. Exhibition form with good substance. Average growth habit with attractive foliage, but needs spraying. Hardiness is good. I propagated 2 plants this season on their own roots– I wanted to see if plant vigour would improve. This variety is worth keeping around. (Last year for reporting this rose.)

MELLOW YELLOW, HT (Carruth '00 int '01)[O Sole Mio X

Midas Touch]. DY. No reports.

MEMORIAL DAY (HEAVEN SCENT, PARFUM de LIBERTÉ), HT (Carruth '02) [Blueberry Hill X New Zealand]. MP, flowers pink with an orchid wash on upper, same tones but slightly darker reverse, very full, 41+ petals, intense fragrance, AARS 2004. No reports.

OUT OF AFRICA, HT (Kordes, nd, int '99?). OB (AB). No reports. (Last year for reporting this rose.)

PERFECTLY RED (ROSE OF THE NATION) (TOPSY), HT (Zary '99) [Seedling X Love]. DR, 26-40 petals, slight fragrance. No reports. (Last year for reporting this rose.)

POP WARNER, HT (Edwards '00 int '01) [Crystalline X Fantasy]. PB, pink and white, 26-40 petals, mild fragrance. Clausen (2 pls 4 yrs 2.5' IL): Mostly white edged with pink. My blooms are mostly decorative with an exhibition bloom on occasion. Good substance. Good growth habit. Medium green foliage. Must spray. Hardiness appears to be okay. This variety seems to take time to establish – could bloom more often.

ROUGE ROYALE (CARUSO) (ROUGE ROYAL), (ROYAL RED), HT (Meilland '02 Romantica Series) [(MEIhirvin X MEInuzeten) X MEIcapula]. RB (DR), raspberry red, 70-80 petals, intense fragrance. No reports.

SÉDUCTION, HT (Meilland '99). MP. No reports. (Last year for reporting this rose.)

SUNDANCE (SUNDANCER), HT (Zary '05 int '04). YB, orange, double, 17-25 petals, moderate fragrance. No reports.

TEMPIE LEE, HT (Whittington '99, 'Elizabeth Taylor' Sport). PB, 26-40 petals, slight fragrance. Clausen (1 pl 3 yrs 4.5' IL): Pink blend, around 40 petals. Exhibition form with good substance. Up-right grower with attractive, green foliage. Must spray it. Hardiness is good. A sport of 'Elizabeth Taylor' which I consider a very good rose. (Last year for reporting this rose.)

THANDI, HT (Taschener 'Mother's Value' Sport '00). DP, deep pink to light red. No reports.

THINKING OF YOU, HT (Fryer '01). MR, velvet crimson, strong fruity fragrance. No reports.

ULTIMATE PINK, HT (Zary, '98 int '99) [Seedling X Fragrant Hour]. LP, 26-40 petals, slight sweet fragrance. Decker (1 pl 7 yrs AK): One of the first to bloom and is consistent and long-lasting on the plant in our cool weather. (Last year for reporting this rose.)

VANILLA PERFUME, HT (Zary '99) [Anne Morrow Lindbergh x Seedling]. AB, light cream apricot/pink, reverse a light apricot, 26-46 petals, intense sweet spicy vanilla fragrance. No reports. (Last year for reporting this rose.)

WHISPER, HT (Dickson int '03) [Solitaire X Elina]. W, AARS 2003. No reports.

GRANDIFLORA

CANDELABRA, Gr (Zary '99) [Tournament of Roses X Seedling]. OB, coral-orange, 20-25 petals, tea fragrance, AARS '99. No reports. (Last year for reporting this rose.)

CRIMSON BOUQUET, Gr (Kordes '99, int '00) [Bad Fussing X Ingrid Bergman]. DR, 20-25 petals, sweet fragrance, AARS 2000. No reports.

GLOWING PEACE (PHILIPPE NOIRET), Gr (Meiland '99 int '01) [Sun King X Roxane]. YB, yellow and orange blend, 26-40 petals, slight fragrance, AARS 2001. No reports.

FLORIBUNDAS

ANTIQUE ARTISTRY, F (Clements '00). AB, yellow/buff/apricot. No reports.

APRICOT VIGOROSA (APRICOLA, APRIKOLA), F (Kordes '06 int '00). AB, flowers apricot blend, deep apricot-yellow upper, changing to apricot and pink, medium (6 cm), full, blooms borne in small clusters, slight fragrance. Brooks (1 pl 1 yr 2.5' ON): Apricot, small double flowers, some scent. Decorative form, strong substance. A slow growing bush with shiny green foliage. Disease-free the first year. Did not do well in its first year. Grew less than one foot with few blooms.

BETTY BOOP (CENTENARY OF FEDERATION), F (Carruth '99) [Playboy X Picasso]. RB, rosy/edged yellow at base, 6-12 petals, fruity fragrance, AARS '99. Decker (2 pl 6 yrs AK): yellow blooms edged with bright red fading to white/deep pink. Semi-double and prolific. (Last year for reporting this rose.)

BRILLIANT PINK ICEBERG (BRIGHT PINK ICEBERG), F (Weatherly '99) ['Pink Iceberg' sport]. PB, deep pink, reverse white, 17-25 petals, moderate fragrance. No reports. (Last year for reporting this rose.)

COTILLION (PERFUME PERFECTION, SERENISSIMA), F (Zary '99 int '00) [Seedling X Shocking Pink]. M, lavender, reverse pale lavender, 41 petals, intense sweet fragrance, Rome GM 1998, Australia GM and FA 2001. No reports.

EASY GOING, F (Harkness '99) ['Livin' Easy sport']. YB, deep gold-apricot, reverse same, 26-30 petals, fruity fragrance. No reports. (Last year for reporting this rose.)

EUREKA, F (Kordes '03) [Bernstein-Rose X Sunflare]. YB,

AARS 2003. No reports.

EVELYN REDFERN, F (Fleming, '03 int '02 CAN) [Morden Fireglow X Bonica]. MR (RB). flowers medium red, medium red upper, reverse same, double (16 -18 petals), 2.5 in. blooms borne 3-12 per cluster: moderate fragrance. Fleming (1 pl 10 yrs 2-2.5' ON): Bright red blooms with prominent stamens, decorative form with very good substance, good repeat. An upright, open, growth habit. Medium-green foliage. Resistant to black spot and mildew. Hardy to Zone 5. Slight fragrance. Never sprayed for disease control.

FABULOUS!, F (Zary '00 int '01) [Iceberg X Sexy Remy]. W, 40-50 petals, slight fragrance, Lyon GM 1997. Decker (2 pls 7 yrs AK): Another consistent bloomer which is almost always in bloom. A nice white, double, medium to large sprays.

FLORAL FAIRY TALE (AFTERNOON DELIGHT, CERVIA, SANGERHÄUSEN JUBILÄUMSROSE), F (Kordes '06 int '04). YB (AB). flowers apricot blend, soft apricot, fading to pink upper, old-fashioned shape. medium (6-7 cm), full, blooms borne in trusses, moderate sweetish fragrance. Broks (1 pl 1 yr 2.5' ON): Apricot, full, fragrant blooms. Decorative form with excellent substance. Upright, bushy growth habit. Dark, shiny green foliage. No disease. Excellent in its first year. Very floriferous with 12-15 blooms at one time in September.

FRAGRANT APRICOT, F (Zary '98 int '99) [Impatient X Amber Queen]. AB, 26-40 petals, slight musk fragrance. No reports. (Last year for reporting this rose.)

GRIMM BROTHER'S FAIRY TALE (GEBRUEDER GRIMM), FL (Kordes '02) OB. No reports.

HARWOOD, F (Harkness '02). MP. No reports.

HONEYWOOD, F (Fryer '02). AB, orange apricot. No reports.

HOT COCOA (NUBIA), F (Carruth '02) [(Playboy X Altissimo) X Livin' Easy]. R, russet, smoky orange upper petal surface, deep rust reverse, moderate fragrance, AARS 2003. No reports.

LIONS FAIRY TALE (CHAMPAGNE MOMENT, LIONS-ROSE), F (Kordes '03). AB, ADR 2002, ROTY 2006. Broks (1 pl 1 yr 2.5' ON): Light yellow, small ivory-coloured blooms. Some scent. Decorative form. Poor substance. Upright growth habit. Dark green foliage. Black spots. Very poor growth and few blooms in its first year.

MARMALADE SKIES (TANGERINE DREAM), F (Meilland '99) [(Tamango X Parador) X Patricia]. OB, 17-25 petals, slight fragrance, AARS 2001. Decker (1 pl 5 yrs AK): A nice orange in small clusters— a consistent bloomer. (Last year for reporting this rose.)

MISS ADA, F (Pawlikowski '98 int '99) ['Playgirl' sport]. LP, sin-

gle bloom, 4-7 petals, slight fragrance. No reports. (Last year for reporting this rose.)

OUR LADY OF GUADALUPE (SHINING HOPE), F (Zary '00). PB (MP), 25 petals, mild sweet fragrance. Decker (2 pls 5 yrs AK): Always has some blooms, light to medium pink in medium sized clusters, consistent.

SIMPLY MARVELOUS!, F (Zary '01 int '02) [Pink Polyanna X Arosedi]. M, 30 petals, old rose fragrance. Decker (2 pls 7 yrs AK): Long-lasting blooms in medium sized clusters. A very nice colour, especially fully open to show its yellow centre.

SORBET BOUQUET, F (Zary '00) [Tournament of Roses X Seedling]. PB, rose pink, reverse light yellow, 26-40 petals, slight fragrance. Decker (2 pls 7 yrs AK): One of my favourites – large clusters of 5" blooms in a large range of bright colours.

SUMMER SAMBA, F (Zary '00 int '01) [Sexy Remy X Summer Fashion]. OP, (AB), apricot orange, 25-30 petals, moderate, sweet damask fragrance. No reports.

YVONNE ALEXANDER, F (Fleming '03 int '01 CAN) [Lavender Friendship X Red Hot]. MR, flowers red, medium red upper, lighter reverse, single (4-8 petals), small (1.5 in.) blooms borne in small clusters; moderate fragrance. Fleming (1 pl 10 yrs 30" ON): red with a small white eye, clusters of 6-15 flowers, slight fragrance. Decorative form, good substance. Upright, bushy growth habit with light green, small foliage. Disease-resistant – never sprayed for disease control. A showy plant.

LARGE FLOWERED CLIMBERS

AMADEUS, LCL (Kordes '06 int '04). DR, flowers dark red, no bluing upper, medium (8 cm), dbl, borne in clusters of 5-7, no fragrance. Bratley (2 pls 1 yr 10' ON): Fiery red, blooms in clusters. Quick growing with deep green, leathery foliage. No disease. Very hardy. Planted in early spring, one on either side of an arbour, and they have grown to the top (8') and over the arch to the other side. I highly recommend this aggressive climber. Recommended to me by Rene Schmitz when I couldn't find a 'Captain Samuel Holland'. I'm very pleased with this rose – only drawback, no fragrance.

DIZZY HEIGHTS, LCI (Fryer '99 int '00). MR, bright red, reverse same, 17-25 petals, slight fragrance. No reports.

FOURTH OF JULY (CRAZY FOR YOU, HANABI), LCI (Carruth '99) [Roller Coaster X Altissimo]. RB, red/white stripes, 10-13 petals, AARS '99. Decker (2 pls 7 yrs AK): An exceptional rose as it outblooms most Floribundas here and is a nice bright colour – certainly a 'starburst'.

MALVERN HILLS, LCI (R) (Austin '01 int '00) [Seedling X Seedling]. YB (DY), coppery yellow, little fragrance. No reports.

NIGHT OWL, LCL (Carruth '05 int '06) [(International Herald Tribune x Rosa soulieana derivative) x (Sweet Chariot x Blue Nile)) X Rosy Outlook] M, flowers mauve, deep wine-red upper, same reverse, large (9-11 cms), single (4-8 petals), blooms borne in large clusters, moderate fragrance. Clausen (1 pl 1 yr 6' IL): A very dark purple with attractive stamens, 8-12 petals, borne in clusters. Decorative form. Good growth habit. Grayish green foliage. Fragrant – I think that I will like this climber once established. The purple blooms with bright yellow stamens really stand out. The petals are ruffled and hopefully it is disease-resistant.

ROYAL STAR & GARTER, LCL (Fryer '01). MP. No reports.

SHRUBS

BE-BOP, S (Carruth '03) [Santa Claus X R. soulieana derivative]. RB (DP), light red with a large yellow eye zone upper, yellow reverse, single (4-11 petals), slight fragrance. No reports.

BENJAMIN BRITTEN, S (Austin '02) [Charles Austin X unnamed seedling]. OR, red with a touch of orange, 41+ petals, intense fragrance, fruity. No reports.

CAREFREE SUNSHINE, S (Radler '02 int '01). LY. Langille (1 pl 1 yr 3' NS): Yellow, blooms continuously, vase form as it matures. Green, matte foliage. No disease. A lovely rose to add a spot of sunshine – my favourite, newest rose last season out of more than thirty.

CÉLINE DION, S (F) (Williams '00 int Quebec '01, internationally '02) [Fifth Avenue X Tropicana]. OB, Brilliant orange-red blending to an amber gold centre, single. No reports.

CHARLES DARWIN, S (Austin '01 int '02) [Seedling X Seedling]. MY (DY), 41 petals, moderate fragrance. No reports.

CHRISTOPHER MARLOWE, S (Austin '05 int '03) [unnamed seedling X Ausgold]. OR, flowers orange-red, yellow & orange reverse, 41+ petals, moderate fragrance. No reports..

CINDERELLA (CINDERELLA FAIRY TALE, LA GIRALDA), S (LCL) (Kordes '06 int '04. LP, flowers light pink, large (10 cm), very full, borne in clusters of 4-6, moderate fruity/apple fragrance. Broks (1 pl 1 yr 1' ON): Light pink, small pale double flowers, no fragrance. Decorative form with poor substance. A tall shrub with poor foliage. Black spots. This rose bush performed poorly for me – it had black spot and very few flowers in its first year. It only grew one foot!

CLAIRE LABERGE, S (HRg) (Fleming '01 CAN). MP. Fleming

(1 pl 12 yrs 4'x4' ON): Medium-deep red, double, single/clusters, 30-35 petals, moderate repeat. Decorative form, excellent substance. Long-lasting blooms on the bush or cut. Red hips. Upright, vigorous grower with abundant, dark green foliage. No disease – never sprayed. Hardy to Zone 4. Typical *rugosa* spicy fragrance. Rain-resistant. Place in background because of its height.

CORVEDALE, S (Austin '02) [Charles Rennie Mackintosh X unnamed seedling]. PB (MP), 26-46 petals, moderate fragrance. No reports.

CROCUS ROSE, S (CITY OF TIMARU) (Austin '01 int '00) [Seedling X Golden Celebration]. W (AB), 41 petals, mild tea fragrance. Chambers (1 pl 5 yrs 5' ON): Light yellow blooms which are cream toward the edges, large, double, cupped, as singles or sprays. Decorative form, with good substance. Arching, tall canes. Some black spot. Appears to be hardy without protection in Toronto. I like this rose more each year – may turn out to be one of Austin's better roses in our climate.

CROWN PRINCESS MARGARETA, S (Austin '99 int '00). AB, Bright apricot-orange, 120 petals, intense fruity fragrance. Chambers (1 pl 5 yrs 4.5' ON): A unique, dark apricot/butterscotch colour, large double blooms, mostly singles but can produce sprays. Decorative form with good substance. Some black spot. Seems hardy without protection in Toronto. I like the colour. McLean (2 pl 5 yrs 50cm BC): Many repeats, clusters of apricot, rosette blooms, 5 cm, scented. Shrub with arching branches. No disease. Has survived five Vancouver winters without additional protection. I have one shrub and one as a standard and both have performed consistently well with profuse repeat, apricot blooms throughout the summer until late October.

DOUBLE KNOCK OUT, S (Radler '04) [Carefree Beauty seedling X Razzle Dazzle seedling]. MR, flowers red, small (4 cm), full (26-40 petals), blooms borne in small clusters, no fragrance. Clausen (2 pls 1 yr 4' IL): Red, more petals than the original 'Knock Out'. Decorative form. Good growth habit. Dark green foliage. Resistant to disease. Very good hardiness. Grown in a 15 gallon pot. It was always in bloom and added much colour to the garden.

ENGLAND'S ROSE (LUDLOW CASTLE), S (Austin '00) W (AB), flowers pale apricot, 118 petals, tea fragrance. No reports.

FALSTAFF, S (Austin '99 int '00). DR, dark crimson turning to purple, 105 petals. No reports.

JAMES GALWAY, S (LCI) (Austin '01 int 00) [Heritage X Seedling]. LP (MP), very double, fragrant. Chambers (2 pls 5 yrs 7' ON): Shades of pink – light to dark pink in one bloom. Fully double, mainly in clusters of three, short petals, flat form with average

substance. Tall, branching canes. A little black spot in the fall. If we have a very cold winter it may not be cane hardy in Toronto without protection, otherwise it would make a good climber for a small space.

JUBILEE CELEBRATION, S (Austin '05 int '03) [Ausgold X unnamed seedling]. PB (OB), pink blend upper, yellow reverse, 41+ petals, intense fragrance. McLean (BC): Performed very poorly in my garden.

KALEIDOSCOPE, S (F) (Walden '99) [Pink Polyanna X Rainbow's End]. M, mauve-tan, 25-30 petals, light fragrance, AARS 1999. No reports. (Last year for reporting this rose.)

KNOCK OUT (PURPLE MEIDILAND), S (Radler '99 int '00). RB (LR), 5-11 petals, single, slight tea fragrance, AARS 2000. ADR 2002. Clausen (10 pls 5 yrs 5' IL): Red blend, 5-7 petals, consistent bloom cycle. Blooms are 3" in diameter. Decorative form. A very vigorous growth habit with blue-green tinged foliage. Disease-resistant with excellent hardiness. AARS 2000 winner – the 'Knockout' series are excellent, very hardy, disease resistant care-free roses.

MISS ALICE, S (Austin '01 int '00) [Mary Rose X Seedling]. LP, peach to pale pink, 41 petals, old rose fragrance. Chambers (1 pl 5 yrs 2' ON): Blush pink, large old-fashion blooms, decorative form with average substance. A very short grower. Some black spot. Hardy in Toronto without protection. A nice, but a very very short rose for the front of the border.

MORDEN SUNRISE, S (Davidson, Agriculture Canada '99 int '00 - Parkland Series). YB, apricot buds, yellow blend, semi-double. Decker (2 pl 3 yrs 3-4" AK): A nice, bright yellow with peach splashes. Consistently in bloom. Healthy foliage. Elicited lots of comments from visitors at Anchorage's Centennial Rose Garden.

PALS NIAGARA, S (Rg) (Fleming '04 int '03 CAN) [Red Hot X breeding line 83, issued by Ag Canada]. MR, flowers red, medium red upper, slightly lighter reverse, medium (3 in.), full (26-40 petals), blooms borne in large clusters, no fragrance. Fleming (1 pl 8 yrs 5' ON): Light, bright red blooms with a slightly lighter reverse. Double, in clusters. Very good substance. Upright, branching shrub with medium-green matt foliage. Resistant to disease and hardy to Zone 4 and possibly to Zone 1. Long-lasting as a cut flower.

PETER JOHN, HMask (Jerabek '00 int '03). OP. No reports.

PILLOW FIGHT, S (Carruth '99, int '00) [Pink Polyanna X Gourmet Popcorn]. W, 17-25 petals, intense honey and rose fragrance. No reports.

PINK KNOCK OUT, S (Radler '04). MP. Clausen (3 pls 2 yrs 4' IL): Medium pink. Compares to the red 'Knock Out'. Decorative

form, vigorous growth habit, dark green foliage. Disease resistant with excellent hardiness. Every rose garden should include the 'Knock Out' series. A very easy rose to propagate for your own use.

RED FLOWER CARPET (ALCANTARA) (RED HEIDETRAUM) (RED VELVET) (VELVET FLOWER CARPET) (VESUVIA), S (Gc) (Noack '01 int '00). MR. McLean (5 pls 6 yrs 80 cm BC): Bright red, profuse repeat; 4 cm single, bright red blooms with yellow centres. Blooms throughout the summer until late October. Spreading shrub to 80 cm. Survived Vancouver winters without protection. I have one ground cover shrub plus four on standards budded at 100-120 cms. The standards spread 60 cm. wide with splendid repeat blooms over the entire shrub. At Gisborne, New Zealand concrete urns containing 'Red Flower Carpet' provide a spectacular display of flowers along the main street of the city.

REGINA LOUISE, S(F) (Clements '99). LP, apricot-white/deep pink stamens, myrrh fragrance, semi-double. No reports. (Last year for reporting this rose.)

ROSY VISION, S (Arnold '06 CAN). MP, flowers medium pink, medium pink upper, medium pink/yellow base reverse, medium (3.5 in.), full (26-40 petals), blooms borne in large clusters, no fragrance. Stanton (1 pl 1 yr 2.5' ON): A good, dark pink, loose petals. Good substance. Sprawling growth habit. Shiny, dark green foliage. No disease. For a first year shrub it put on a good show.

ROYAL AMBER, S (Clements '00). AB, amber and yellow. No reports.

STARRY NIGHT (ANITA PEREIRE), S (Orard '02) [Anisley Dickson X R. wichurana]. W, single, 5 petals, mild fragrance. Paris Gold Medal 1996. AARS 2002. No reports.

THE GIFT, S (Pol) (Demits '81, int '00) W. No reports.

THE INGENIOUS MR. FAIRCHILD, S (Austin '04) [unnamed seedling X unnamed seedling]. PB, light pink upper, mauve reverse, very full, 41+ petals, moderate fragrance. McLean (BC): Performed poorly in my garden.

VANCOUVER BELLE, S (Jalbert '04 CAN) [Thelma's Glory X Sexy Remy]. LP, flowers light pink, pink upper, lighter pink reverse, dbl. (17-25 petals), slight fragrance. No reports.

WHAT A PEACH, S (Warner '01 int '02) [Laura Ford X Sweet Magic]. AB, apricot, strong fragrance. No reports.

WILLIAM BOOTH, S (K) (Agriculture Canada, '99 - Explorer Series). MR (LR), deep red bud changes to medium red, fades to light red, 5 petals, hardy in Zone 3. Decker (1 pl 6 yrs AK): Small, 5-petalled blooms of pink and white. Arching canes. Very little

snow-cover here but no die-back – USA Zone 3-4. Nice hips.

WILLIAM SHAKESPEARE 2000, S (Austin '01 int '00) [Seedling X The Dark Lady]. MR (DR), purplish red, 41 petals, strong old rose fragrance. McLean (2 pls 3 yrs 60 cm BC): Bright red crimson), 8 cm blooms, repeats throughout the summer until late October. Good scent. Shrub form, no disease. Survived three Vancouver winters without additional protection. One shrub and one standard. The standard displays the nice red colour spectacularly.

MINIATURES/MINI-FLORAS

AMY GRANT, MinFl (Tucker '98 int '99). LP, light pink/white. Decker (2 pls 6 yrs AK): A nice rose. White with pink tints in the centre, steady bloom production. Healthy.

AUNTIE LOUISE, Min (Jalbert '04 int '00 CAN) [Orange Honey X Sexy Remy]. OB, orange upper, lighter orange reverse, amber yellow with orange shades, full, 26-46 petals, slight fragrance. No reports.

AUTUMN SPLENDOR (COTLANDS ROSE), MinFl (M. Williams '99). YB, 26-40 petals, slight fragrance, AoE '99. Decker (1 pl 6 yrs AK): Colour is great, but bloom production isn't. Disease resistance is fair. (Last year for reporting this rose.)

BABE, Min (Lougheed '04 CAN). MP. Stanton (2 pls 3 yrs 10-12" ON): A pretty coral-pink. Exhibition form with good substance. A neat growth habit. Dark green foliage, some black spot. Hardiness is good. A good blooming mini.

BABY BOOMER, Min (Benardella '03 int '01) [Ivory Beauty X Kristin]. MP (LP), medium pink, lighter pink reverse, 16-22 petals, mild fragrance, AoE 2003. Decker (2 pls 4 yrs AK): Another nice rose. Clear pink, high-centred blooms. Some mildew.

BEST FRIENDS, Min (Bridges '02) [Hot Tamale X unknown seedling]. OB, yellow reverse, AoE 2002. Decker (2 pls 4 yrs AK): Lots of small to medium size, orange and yellow blooms. Fairly healthy. Nice colour.

BRITTANY'S GLOWING STAR (AMBER STAR), Min (Mander & Pazdzierski '99 CAN) ['Glowing Amber' Sport]. OB (AB), amber orange/reverse golden yellow, 26-40 petals, slight fragrance. Clausen (1 pl 4 yrs 1.5' IL): Very floriferous, double, exhibition type blooms with good substance, blooms often. Plant is very bushy. Medium green foliage. Resistant to disease. Hardiness is very good. If you like petite orange blooms with excellent form, give this mini a try. This variety has much eye appeal for visitors. (Last year for reporting this rose.)

CALIENTE (MY SWEETIE), Min (Benardella '05) [Ruby X Timeless]. DR, flowers dark red, dark red upper, medium red reverse, medium (2 in), full (26-40 petals), blooms borne mostly solitary, moderate fragrance, AoE 2006. Clausen (3 pls 1 yr 2.5' IL): Red, double, 25 petals, exhibition form, one to a stem. Very good substance. Slight fragrance. Very good growth habit. Dark green foliage. Good disease resistance. A beautiful, well-formed bloom attached to a balanced bush. A very profuse bloomer.

CARLEY (CARLEY REGAN), Min (Jalbert '04 CAN). MR. Stanton (1 pl 3 yrs 12" ON): A very pretty red bloom, exhibition form with good substance. Upright growth habit with medium green foliage. Black spots. Hardiness is good. A nice strong grower.

CAROLINA LADY, Min (M. Williams '00). MR. No reports.

CHATTOOGA, Min (M. Williams '04) [Pierrine X selected pollen]. DP, deep pink, double, 17-25 petals, no fragrance, AoE 2005. Decker (1 pl 2 yrs AK): Mostly white in the centre with dark pink on the outer petals. Medium-to-large HT blooms. Does mildew.

CHLOE'S STAR (CHLOE), Min (Pazdzierski '02 int '03) ['Brittany's Glowing Star' Sport]. MY, double, 17-25 petals, slight fragrance. No reports.

CONSTELLATION, Min (Saville '00). W. Decker (1 pl 3 yrs AK): Medium sized white blooms with yellow petals around centre when fully open. Medium bloom production. A nice rose!

CORAL REEF, Min (Mini-Moss) (Jalbert '04 int '00 CAN) [Dresden Doll X Silver Jubilee]. MP, medium pink, rich coral colouring, full, 26-40 petals, heavily mossed buds, scented moss, sticky, slight fragrance. No reports.

DORIS MORGAN, Min (Bridges '02) [Jennifer X Purple Dawn]. DP, deep pink, light pink and white, 17-25 petals, moderate fragrance, AoE 2003. Clausen (5 pls 4 yrs 2.5' IL): A combination of pink blends, 18-24 petals, nicely formed exhibition blooms with very good substance. No fragrance. Good growth habit with attractive, dark green foliage. Needs spraying. Good hardiness. One of Bridges' good productions. This rose commands a spot in any miniature garden.

DOUBLE GOLD, MinFl (White '03) [[[Zorina X Baby Katie) X June Laver) X Old Glory]. YB (DY), yellow blend, light yellow and golden-yellow upper, reverse same, 26-40 petals, strong rose fragrance. Decker (1 pl 3 yrs AK): Medium yellow with peach tints – not really gold. Healthy. A nice rose.

ELOISE, MinFl (Fleming '03 int '02 CAN) [Alberta X Lavender Dream]. MP, flowers medium pink, reverse same, double (17-25 petals), medium blooms borne in small clusters, slight fragrance. Fleming (1 pl 10 yrs 18" ON): Me-

dium pink, decorative form, good substance. Upright, airy growth. Small, medium matt green foliage in scale with the flowers. Resistant to disease – never sprayed. . Hardy to Zone 5. Steady bloom production all summer and into the fall. Roots easily from cuttings. Its airy habit lends itself to rock garden planting.

ERIN ALONSO, Min (Alonso '03 int '04) [Sport of 'Bee's Knees']. MY, full (26-40 petals), slight fragrance. Clausen (2 pls 2 yrs 2' IL): Medium yellow, very good form and substance – can be exhibition blooms. Good growth habit with dark green foliage. Black spots. Hardiness is very good. Both of my plants are budded, hoping to increase stem length. A sport of the great 'Bee's Knees'. My 'Bee's Knees' are very large bushes and excellent bloomers.

GALA, Min (Saville '99 int '00) [High Jinks X Seedling]. DP, 17-25 petals, no fragrance. Decker (1 pl 5 yrs AK): Large, medium pink, many-petalled blooms in medium sized clusters. Can mildew.

GRADUATION DAY, MinFl (Jalbert '04 int '99 CAN) [Thelma's Glory X Sexy Remy]. AB,

apricot upper, apricot reverse, very double, 41+ petals, frilly, slight fragrance. No reports. (Last year for reporting this rose.)

HEIDI PARADE, MinFl (Poulsen '01). MP, coral pink/cream to green petal bases. No reports.

HIGH FLIGHT, Min (Harkness, int White Rose Nurseries, '01). W, tinged with green. No reports.

HILDE, Min (Benardella '99 int '01) [Figurine X Kristin]. RB (PB), white with red washing, reverse ivory, 17-25 petals, moderate fragrance. Clausen (2 pls 4 yrs 1' IL): Red blend, very few blooms, no fragrance. Decorative form. Poor growth habit. Dark green foliage. Must be sprayed. Average hardiness. I have not had much success with 'Hilde' The genetics appear to be right; perhaps the plants do not like my soil.

ICED RASPBERRY, Min (White '05). RB, flowers dark and medium red upper, white and red reverse, small (1.75 in), very full (41 + petals), blooms borne mostly solitary, slight fragrance, AoE 2006. Clausen (3 pls 1 yr 3' IL): Red/pink blend, a very profuse bloomer on a sturdy bush. Some exhibition blooms. Average substance. Dark green foliage which seems to be resistant to disease. Wendy White is a great hybridizer, having produced some great miniatures.

JESLYN, Min (Bridges '00 int '01). LY. Clausen (2 pls 4 yrs 1'-2' IL): Light yellow, mostly decorative, but can have an attractive bloom. Average substance. Sparse bloomer. Small plants with good foliage. Needs spraying. Hardiness is very good. If you like yellow roses, this plant will make a great border rose. It needs ample sunlight.

LEMON GEMS, Min (Walden '99). MY, 26-40 petals, slight fragrance, AoE '00. Decker (1 pl 7 yrs AK): A nice, healthy plant with lots of blooms – light yellow. (Last year for reporting this rose.)

LITTLE PINKIE, Min (Micro-mini) (Moore '00), MP, very double. No reports.

LOVE KNOT, Min (ClMin) (Warner '99 int '00) (Laura Ford X Ingrid Bergman). MR, bright red, 17-25 petals, slight fragrance. No reports.

MAGENTA MYSTIQUE, Min (Benardella '05) [unnamed X Kristin]. M, very full, 41+ petals, moderate fragrance. Decker (1 pl 2 yrs AK): Large, nicely shaped blooms on a tall plant – a pinky mauve. Not very productive. Some mildew.

MARGARET LAVER, Min (Laver '01 int '99 CAN). W. No reports. (Last year for reporting this rose.)

MARILYN WELLAN, Min (Moe '99 int '01) [Sheri Anne X Wistful]. LP, apricot/ reverse lighter, 17-25 petals, slight fragrance. Clausen (1 pl 4 yrs 2' IL): White edged with pink, 30 petals, decorative form with average substance. A good growth habit. Dark green foliage. Needs spraying. Hardiness is very good. Named after a great lady. Mostly a garden rose, but merits a spot in any good rose garden as it is an attractive bush with similar blooms.

MEMPHIS KING, MinFl (Wells '03). DR, flowers dark red, medium, full (26-40 petals), blooms borne mostly solitary, slight fragrance. Clausen (3 pls 1 yr 2.5' IL): Large, clear red blooms, excellent exhibition form with very good substance. Very little fragrance. Very good growth habit with well balanced foliage. Sprayed weekly. Makes nice bouquets.

MERLOT (SPARKLE BERRY), Min (Benardella '02) [Figurine X seedling]. RB, dark red upper, coated white reverse, 17-25 petals, slight fragrance, AoE 2002. Clausen (4 pls 4 yrs 2.5' IL): Red blend, Decorative form, well-shaped, good substance. Produces many blooms throughout the growing season. An average growth habit. Attractive foliage. Needs spraying. Hardiness is good. Can have exhibition blooms. I have two 'Merlot' budded and two on their own roots.

MICHEL CHOLET, Min (Jacobs '00) [Prima Donna X San Jose Sunshine]. AB, dark rich apricot, slight fragrance, AoE 2001. No reports.

MISTRAL PARADE, MinFl (Poulsen '01). DY. No reports.

MIXED EMOTIONS, Min (Jalbert '03 CAN). RB (striped). No reports.

NEON COWBOY, Min (Carruth '02 int '03) [Emily Louise X (Playboy X Little Artist)]. RB, red with yellow on upper petal sur-

face, yellow reverse, single, slight fragrance. Decker (1 pl 6 yrs AK): Lots of small red/orange blooms, not many petals – a mildewer. We had lots of rain this summer and those roses that mildew did.

ORANGE PATIO WONDER, Min (Jalbert '04 int '99 CAN) [Orange Honey X Sexy Rexy]. OB, orange upper, light orange reverse, very full, 41+ petals, frilly, slight fragrance. No reports. (Last year for reporting this rose.)

PEACH DELIGHT, MinFl (Saville '02) [Sequoia Gold X Harmony]. AB, peach upper, pale apricot reverse, 41+ petals, slight fragrance. Decker (1 pl 6 yrs AK): A nice, peachy rose which picks up pink as it ages. Average HT type blooms. Some mildew.

PINK PATIO WONDER, MinFl (Jalbert '04 int '99 CAN) [seedling X Sexy Rexy]. MP, medium pink, full, 41+ petals, slight fragrance. No reports. (Last year for reporting this rose.)

RALPH MOORE, Min (Saville '99). MR, dark velvet red/lighter red reverse, 17-25 petals, slight fragrance, AoE 2000. Decker (1 pl 7 yrs AK): Basically a nice rose, but was susceptible to our wet, rainy weather. (Last year for reporting this rose.)

REAH NICOLE, MinFl (Jalbert '04 int '00 CAN) [Loving Touch X Kristin]. PB, pink blend, pink, cream upper, pink-cream reverse, full, 26-40 petals, slight fragrance. No reports.

RED PATIO WONDER (RED PATIO), Min (Jalbert '99 CAN). MR, dark red. No reports. (Last year for reporting this rose.)

RED SCENTSATION, Min (White '03) [Taxi X ((Party Girl X Sparks) X New Zealand)]. MR, medium red upper, reverse same streaked with burgundy, 17-25 petals, very fragrant. Decker (2 pls 4 yrs AK): Nice scent, but lots of mildew.

RUBY BABY, Min (Christopher '01) ['Hot Tamale' Sport]. RB (OR). Clausen (7 pls 5 yrs 3' IL): A burnt red/orange blend. Very attractive blooms on a sport of 'Hot Tamale'. Plenty of petals for exhibition and most blooms are well-formed and have very good substance. Grows well in the ground or in pots. Dark green foliage which has good disease resistance. Hardiness is very good. Perhaps it needs fragrance, but a unique colour and nice form. A rose for everyone to try.

SALUTE, Min (White '03) [(Vista X Party Girl) X (Party Girl X Teddy Bear)]. DR, double, 17-25 petals, slight fragrance, AoE 2004. Clausen (6 pls 2 yrs 3' IL): A very deep, dark red. Well-formed blooms, can have exhibition form, very good substance, profuse bloomer. Winter hardy. Average height with attractive foliage. Very good disease resistance. Survives without much winter protection. Dark red blooms similar in colour to 'Black Jade'. It does better in a sunny location.

SCUGOG SUNRISE, Min (Jalbert '05 CAN). PB, blends of apricot and pink with flushes of salmon. Stanton (2 pls 2 yrs 10"-20" ON): Pink blend, very pretty, exhibition form, good substance. Upright, vigorous growth. Dark, matt, green foliage. Some black spot. Hardiness is good. In a pot by itself it is big and sturdy – in a window box with others, just average.

SPRINGWOOD CLASSIC, Min (Laver '99 CAN) [seedling X seedling]. MP, 26-40 petals, no fragrance. No reports. (Last year for reporting this rose.)

STRIPED FESTIVAL, Min (Laver '99 CAN). RB, very rich stripe, deeper than most, 17-25 petals, slight fragrance. No reports. (Last year for reporting this rose.)

SUN SPRINKLES, Min (Walden '99) [Yellow Jacket X seedling]. DY, deep yellow, 26-40 petals, slight fragrance, AARS 2001, AoE 2001. No reports. (Last year for reporting this rose.)

THE COLOUR PURPLE, Min (Jalbert '04 CAN) [Loving Touch X Rubies 'n' Pearls]. M, unique deep purple colour, dbl. (17-25 petals), moderate fragrance, lemon-scented. Stanton (2 pls 3 yrs 15" ON): Colour is a bit muddy. Exhibition form, good substance. An upright growth habit. Dark green foliage. Black spots. Hardiness is good. A good grower.

THE McCLAREN ROSE, Min (Jalbert '00 CAN). DY. Stanton (1 pl 3 yrs ON): A nice, strong yellow. Decorative form with good substance. An upright growth habit with medium green foliage. Black spots. Hardiness is good.

WHITE PATIO WONDER (WHITE PATIO), Min (Jalbert '04 int '99 CAN) [Thelma's Glory X Sexy Remy]. W, white, very full, 41+ petals, frilly, no fragrance. No reports. (Last year for reporting this rose.)

WIND RHYTHM, MinFl (Jalbert '01 CAN). OB. No reports.

YEAR 2000, Min (Jalbert 2004 int '00 CAN). YB (RB), yellow edged bright red. Decker (1 pl 5 yrs AK): A consistent bloomer with bright yellow, edged-in-red blooms. Healthy.

